

FISHING • HUNTING • CONSERVATION • OUTDOOR RECREATION

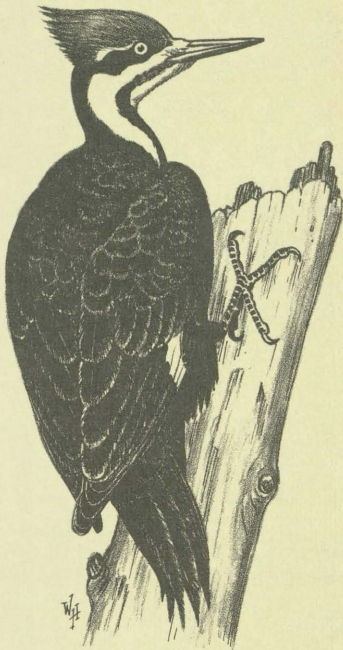
Florida WILDLIFE

SEPTEMBER 1976



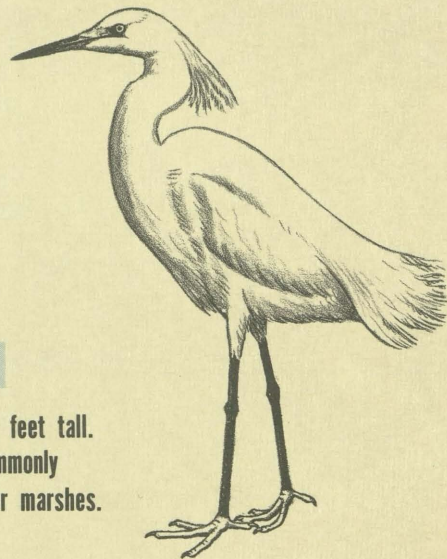
YOU CAN HELP

PROTECT OUR VALUABLE NON-GAME BIRDS



PILEATED WOODPECKER

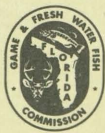
Large, crow-size woodpecker with solid black back, white underwings and red crest on head. Uncommon and local in extensive forests.



SNOWY EGRET

Long-legged wading bird. 3 feet tall. Legs black, feet yellow. Commonly seen in fresh and salt water marshes.

**STATE AND FEDERAL LAWS PROHIBIT THE TAKING OR MOLESTING
OF NON-GAME BIRDS WHICH ARE A BENEFICIAL AND ENJOYABLE
PART OF OUR NATURAL ENVIRONMENT.**



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★

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The Cover

A good retriever, such as the Labrador shown with a mallard on this month's cover, can greatly reduce the loss of waterfowl downed but not recovered by the hunter. Also, the joy of watching a good dog work adds greatly to a day afield.

Photograph by Gene Smith

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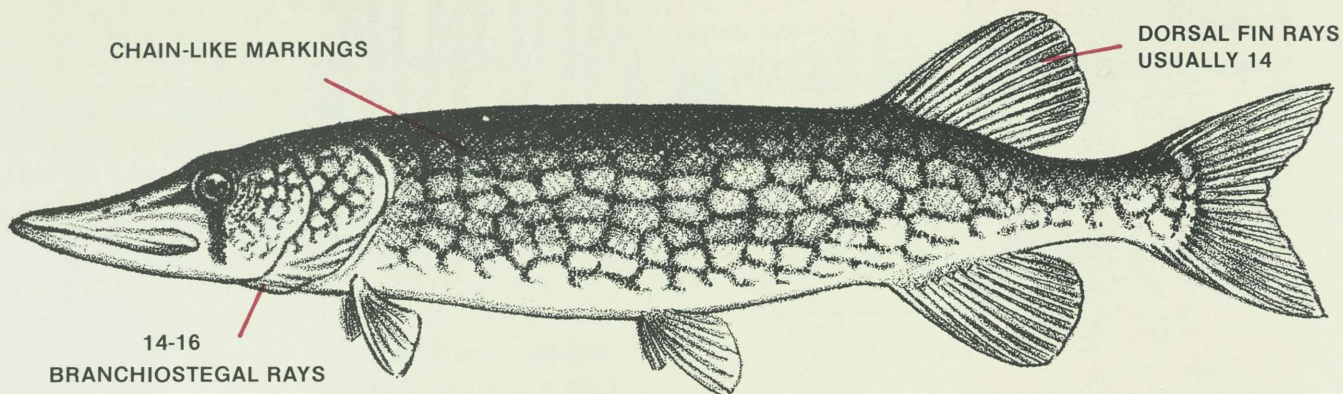
ROSE



TALLAHASSEE

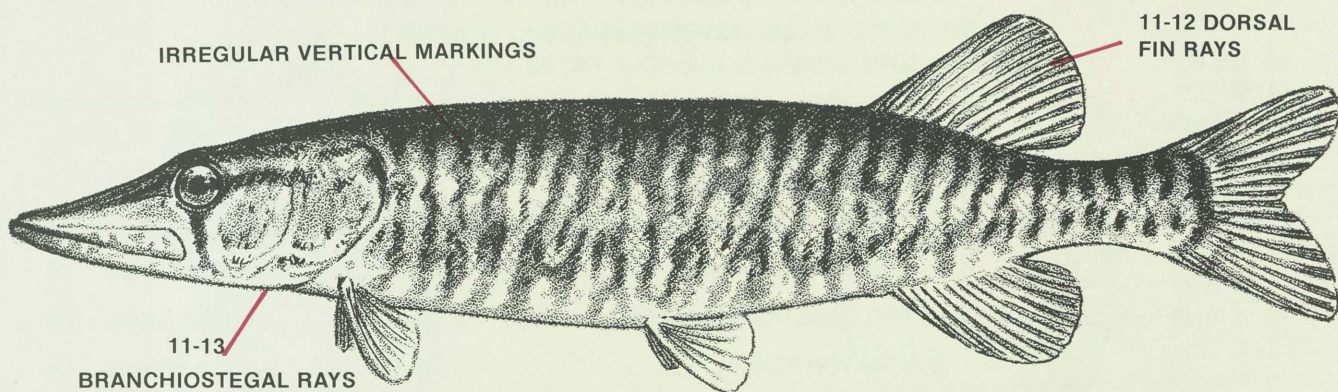
FISH IDENTIFICATION

RECORD FISH PROGRAM—PART 2



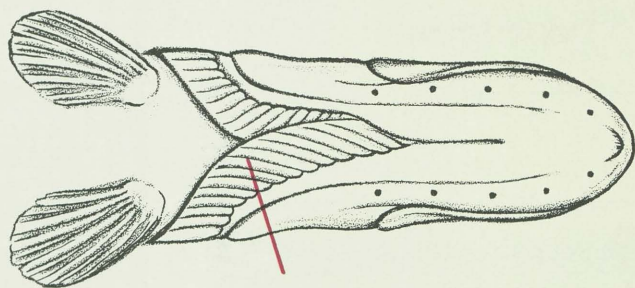
SIZE TO 30 INCHES OR MORE

Chain Pickerel—*Esox niger*



SIZE—RARELY OVER 12 INCHES LONG

Redfin Pickerel—*Esox americanus*



BRANCHIOSTEGAL RAYS

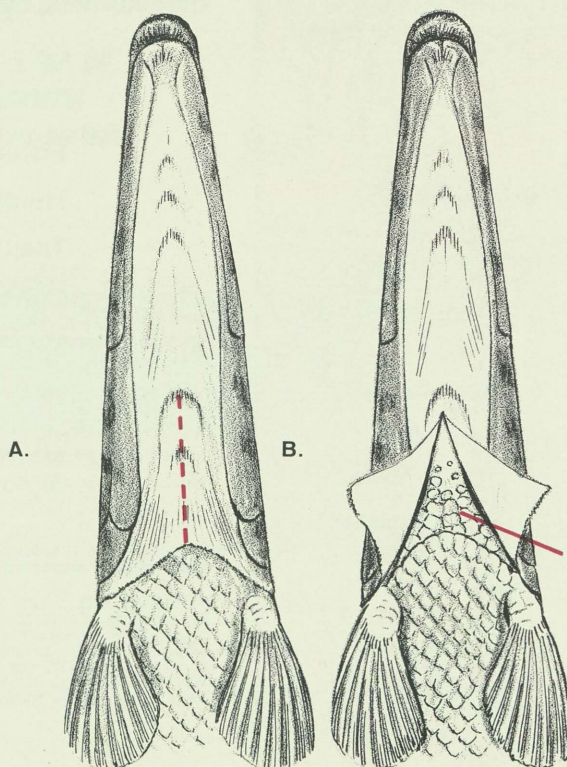
underside of pickerel head
showing branchiostegal rays

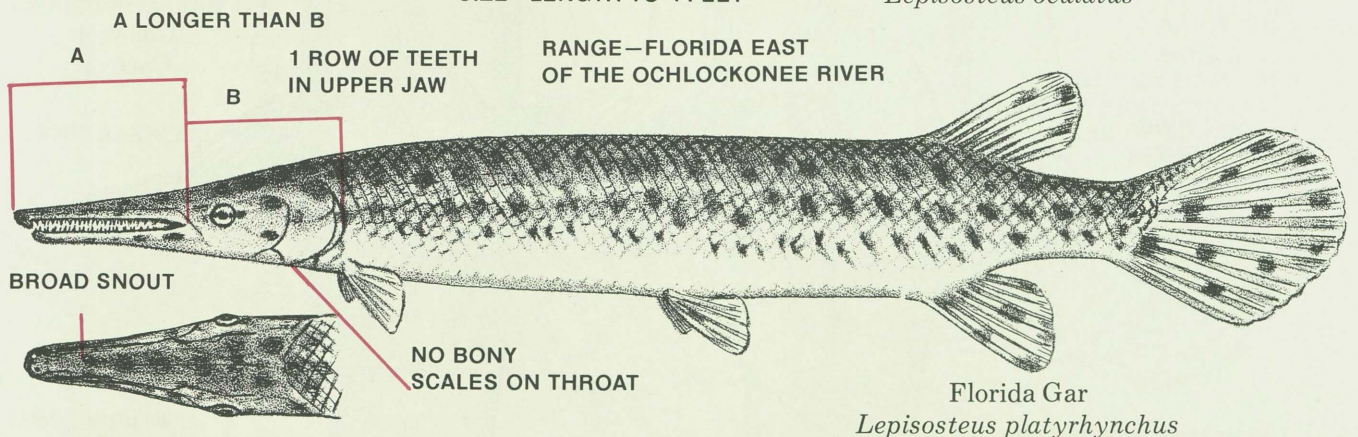
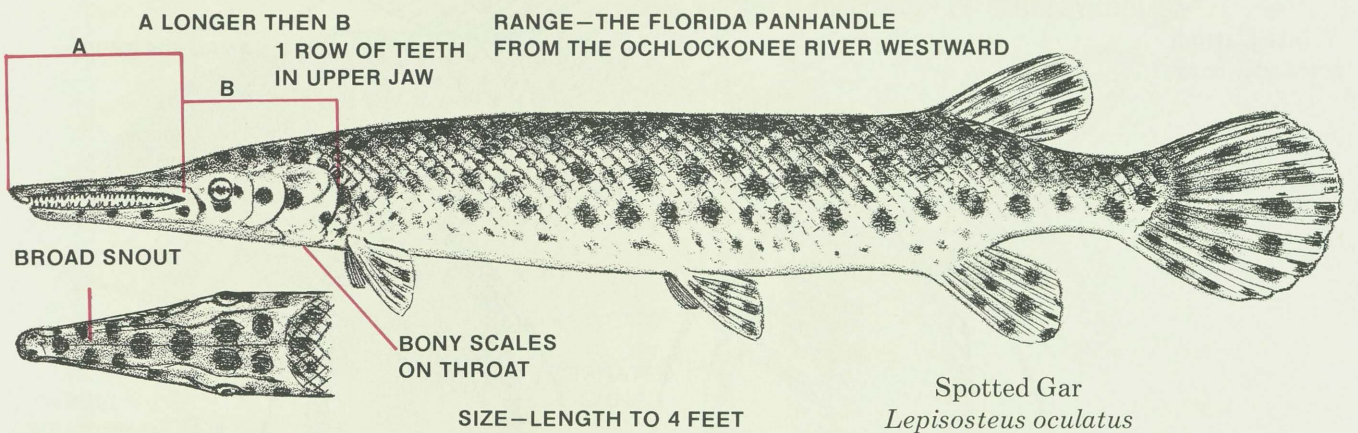
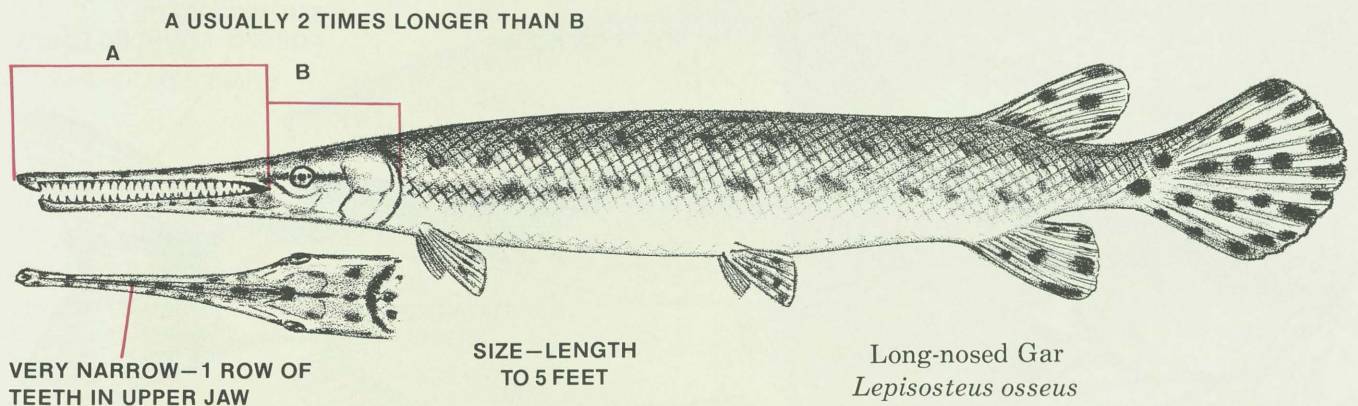
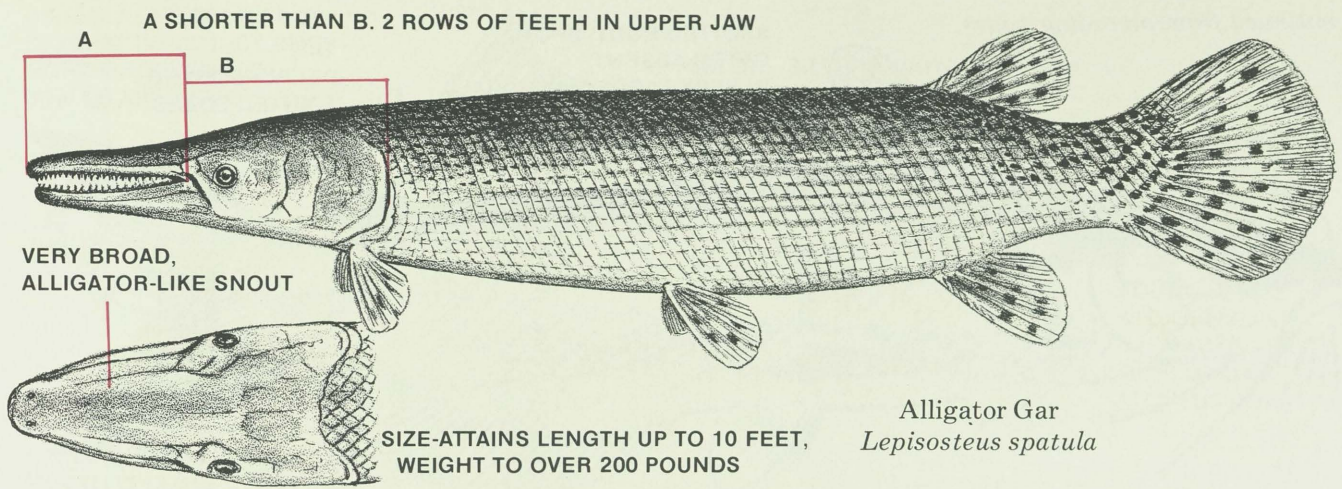
SEE NEXT PAGE

METHOD OF IDENTIFICATION OF SPOTTED AND FLORIDA GARS

A. SPLIT SKIN OF ISTHMUS (OR THROAT)

B. FOLD BACK. SPOTTED GAR HAS SCALES PRESENT.
FLORIDA GAR DOES NOT. USE OF MAGNIFYING GLASS
IS HELPFUL WHEN MAKING EXAMINATION.

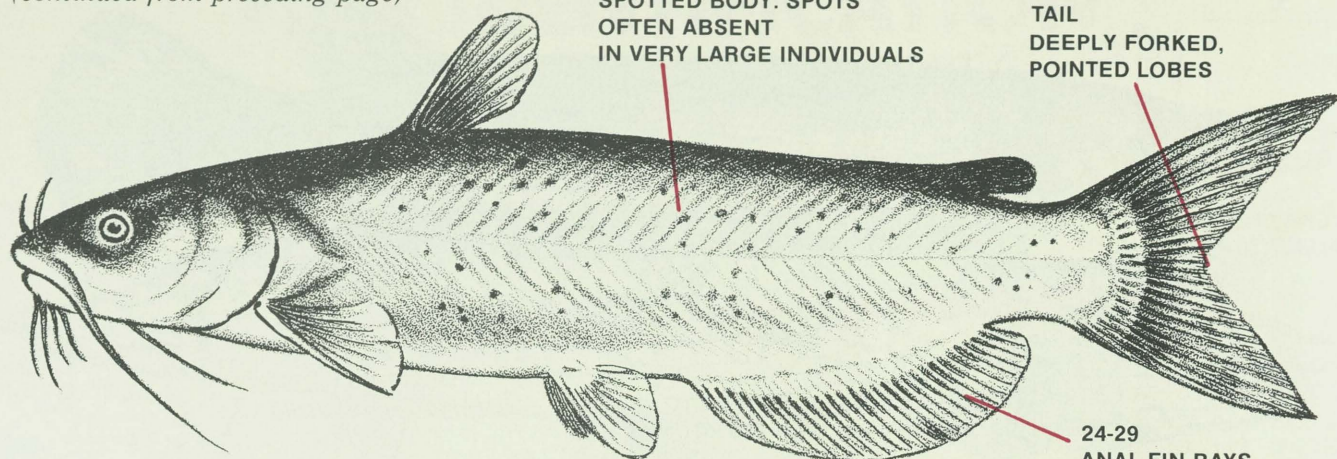




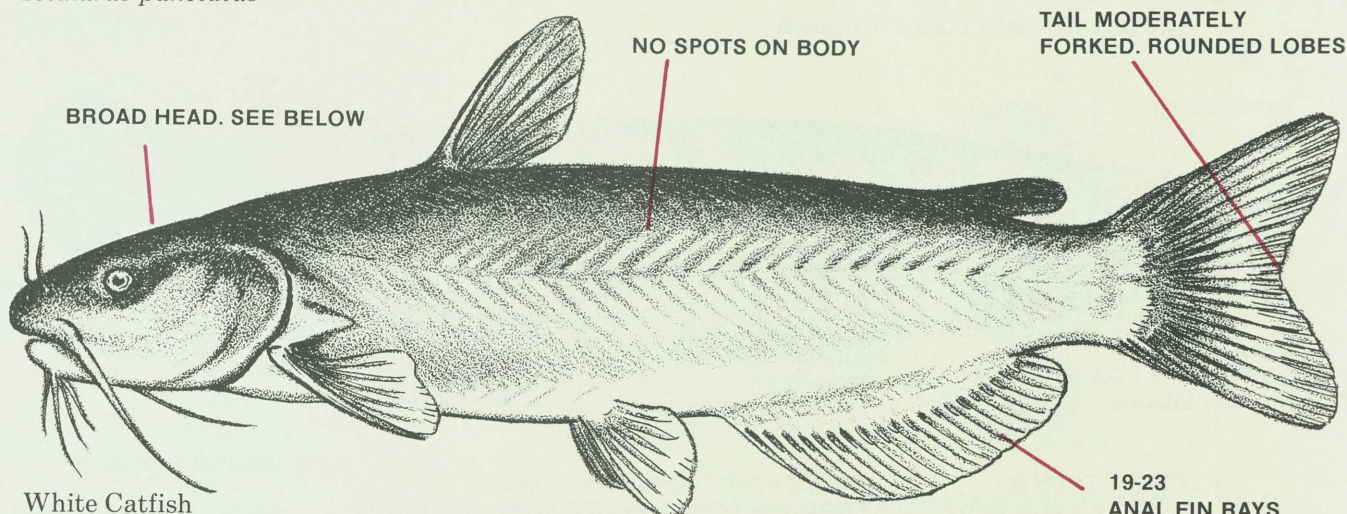
Drawings by Wallace Hughes

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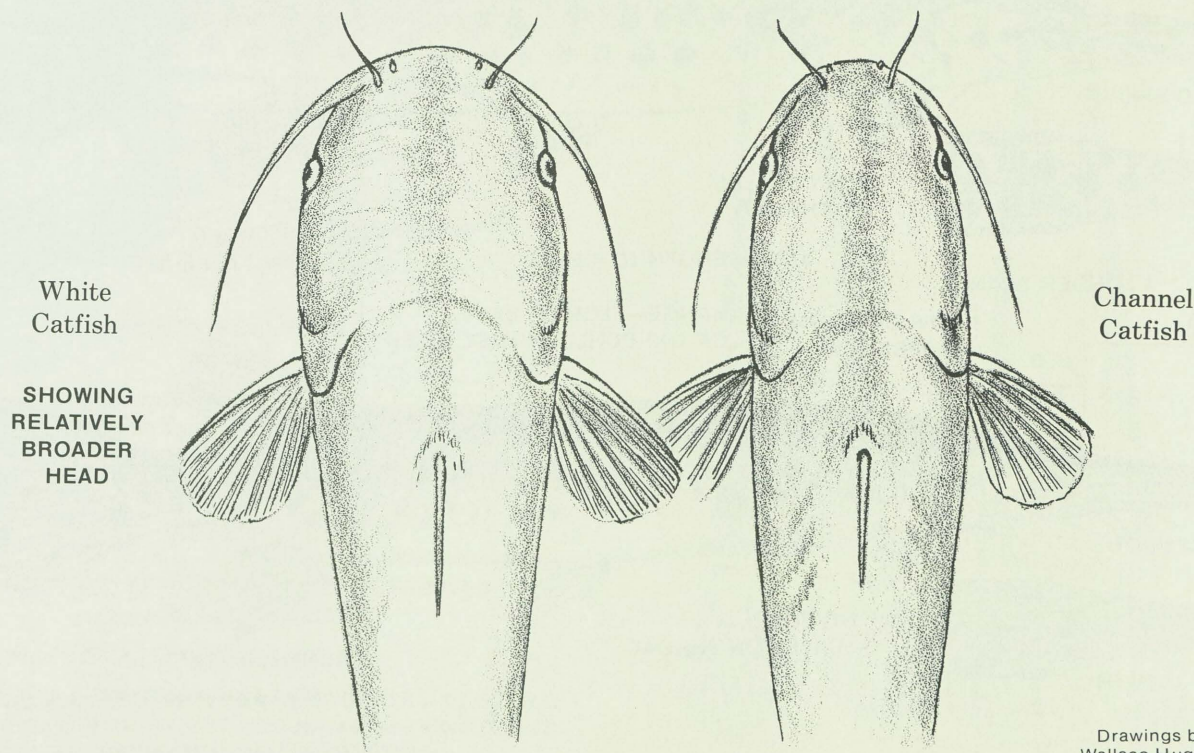
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Channel Catfish
Ictalurus punctatus



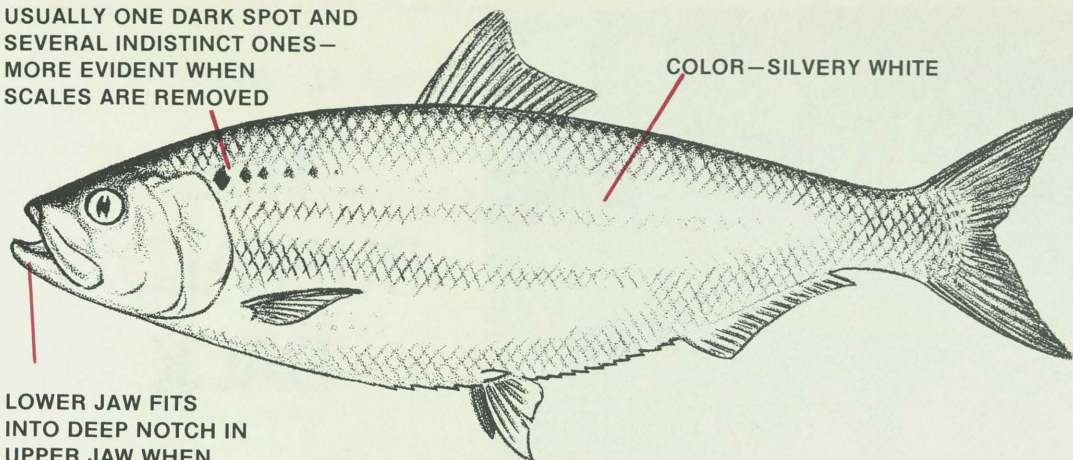
White Catfish
Ictalurus catus



Drawings by
Wallace Hughes

USUALLY ONE DARK SPOT AND SEVERAL INDISTINCT ONES—MORE EVIDENT WHEN SCALES ARE REMOVED

COLOR—SILVERY WHITE



American Shad
Alosa sapidissima

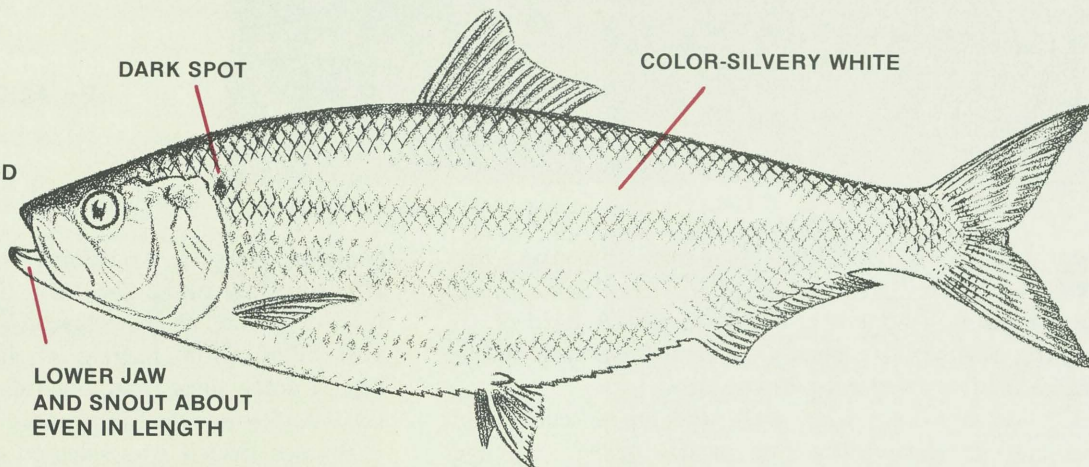
FOUND IN THE ST. JOHNS AND ST. MARYS RIVERS OF FLORIDA'S ATLANTIC COAST

LOWER JAW FITS INTO DEEP NOTCH IN UPPER JAW WHEN MOUTH IS CLOSED

FOUND IN THE LARGER RIVERS OF FLORIDA'S GULF COAST FROM THE SUWANNEE WESTWARD

DARK SPOT

COLOR—SILVERY WHITE



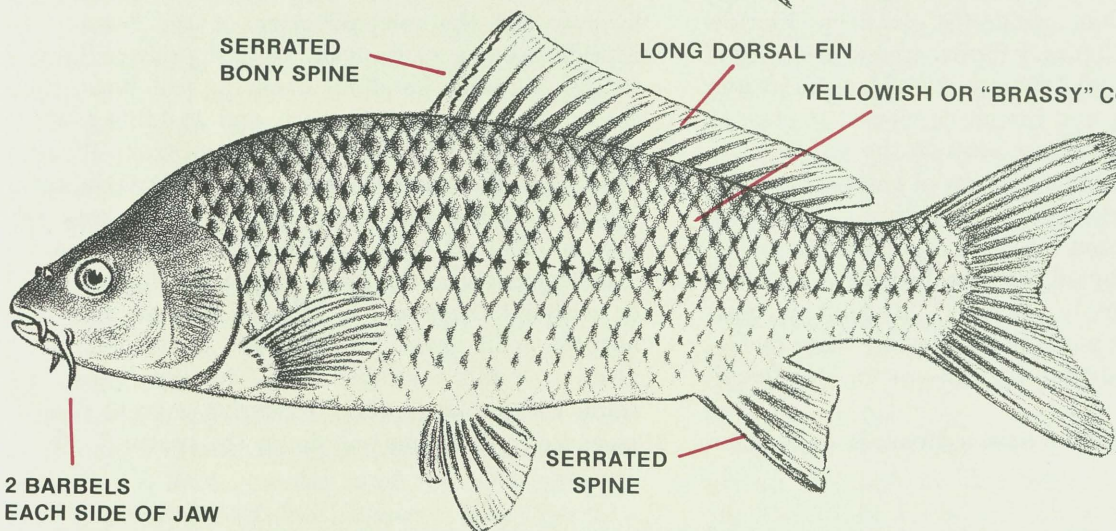
Alabama Shad
Alosa alabamiae

LOWER JAW AND SNOUT ABOUT EVEN IN LENGTH

SERRATED BONY SPINE

LONG DORSAL FIN

YELLOWISH OR "BRASSY" COLOR



Carp
Cyprinus carpio

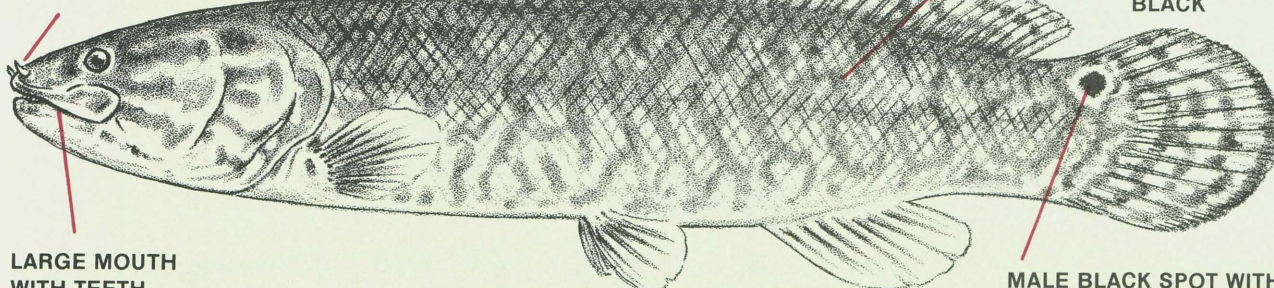
2 BARBELS EACH SIDE OF JAW

SERRATED SPINE

VERY LONG DORSAL FIN

LARGE INDIVIDUALS MAY LOSE BODY MARKINGS AND BE ALMOST BLACK

SHORT BARBELS



LARGE MOUTH WITH TEETH

MALE BLACK SPOT WITH LIGHTER RIM; FEMALE NO RIM OR NO SPOT

Bowfin or "Mudfish"—*Amia calva*



Photo By William Greer

THE BUFFALO'S BACK

By AUDREY BARR

BUFFALO, WHICH ONCE ROAMED FLORIDA, are now making a comeback at Paynes Prairie State Preserve, located south of Gainesville. A herd of 10 young bison were placed on a remote section of the huge preserve several months ago.

"They are doing very well, and are as contented as can be, eating the fine prairie grass," reports Jim Stevenson, chief naturalist for the Florida Division of Recreation and Parks, who stresses that the animals are completely out of sight of highways crossing the prairie, and cannot be viewed at present because the preserve is not open to the public.

Stevenson says reintroduction of the buffalo into Florida follows park policy of bringing back native species that have been removed or exterminated.

"We have determined through historical research that buffalo definitely occurred in what is now Florida," Stevenson says, citing, among other books, *Diego Pena's Expedition to Apalache and Apalachicola in 1716*.

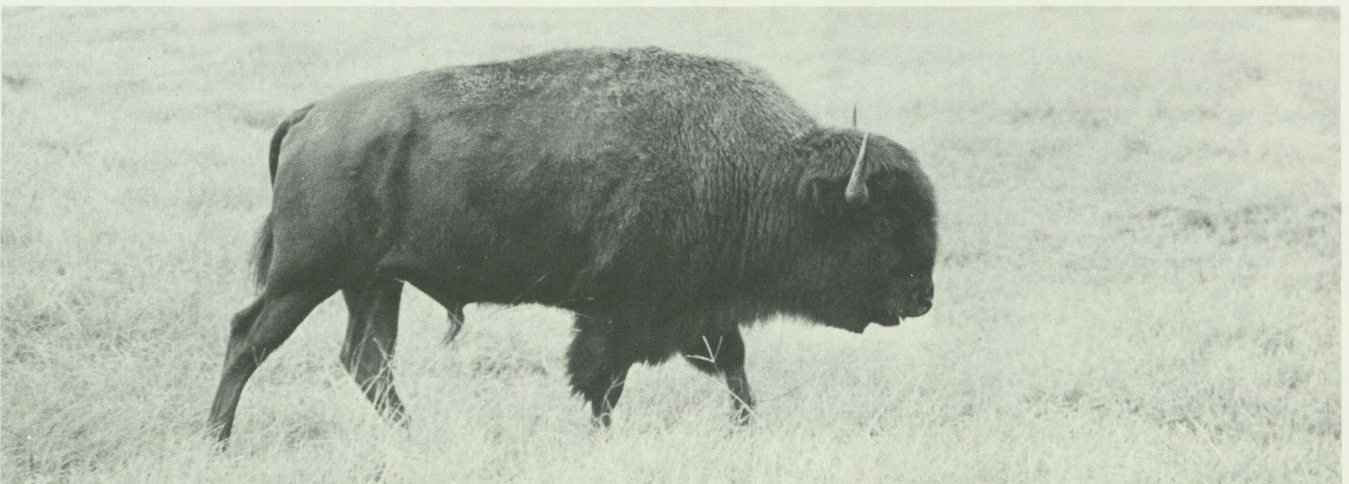
"This report recounts how a Spanish expedition

traveled from St. Augustine to West Florida, and killed buffalo along the way. They killed bison at Lake Newnan, at the edge of Paynes Prairie. They also killed three buffalo at Ichetucknee Springs, now a state park, and several more were taken at Lake Jackson, near Tallahassee," Stevenson notes.

Paynes Prairie was selected as the most suitable location for the reintroduction of the bison into Florida because of its lush, natural prairie. Several federal agencies handling bison in the West were consulted, and the U.S. Fish and Wildlife Service donated three bulls and seven cows from Wichita Mountains National Wildlife Refuge, in Oklahoma. Young animals were selected because it was felt they could adapt more easily to the Florida climate.

Stevenson says the bison will not be domesticated or confined. They will be allowed to roam free in a natural, wild state. "Although it will take many years to build a sizable herd," he concludes, "we think the public is going to derive a great deal of pleasure from seeing buffalo on the prairie." ●

Photo By Larry Martin



Words for Fishermen

FISHING

the outdoor scribes have been extra busy recently turning out fishing books, some of which are informative, entertaining, or even both



By CHARLES WATERMAN

THERE NEVER WERE AS MANY fishing books as there are today, some of them thoughtful jobs that have taken someone a long time to put together, and others simply typed to specifications by writers who emphasize quantity and often make a heck of a lot of money.

In the past year I've read more highly valuable fishing books and more nearly useless ones than ever before. Being on the edge of the business, I have a pretty good idea of what certain authors are going to come up with, and some of them have little to say but can say it so entertainingly that you don't realize you've been had. If it was purely entertainment you wanted, you still made a good buy, but hard information can be lost in the fun.

There are some other writers capable of turning out 80,000 words with neither entertainment nor information included. They write for money, and write very rapidly, and will often admit that if they invested a little more time and effort their stuff would be a lot better, but that *a lot* of mediocre stuff pays better than *a little* good work.

There are plenty of general books on fishing, quite a number being devoted to introductory stuff for beginning anglers, and most of them are good as far as they go. Then there are more specialized books, generally by well-known writers, often fishing contributors or editors of large magazines, and they are generally reliable, whether you find exactly what you want or not.

But some of the real treasures are written by little-known authors who are highly specialized and often pretty local. Such a writer often has a tough time getting his book published, because one of the first things a publisher asks is, "How wide an appeal has it?"

If a manuscript is concerned only with saltwater trout fishing along 20 miles of the gulf coast, the publisher is going to turn away. It probably won't make money. I've talked to about a dozen fishermen with a purely local view of a specific kind of fishing, all of them masters in their field and wanting to write books, but, so far, none of them has gotten his work published. Not only is the publisher likely to ask if a subject will attract national interest, he may even wonder about the overseas sales.

Thus we lose some wonderful stuff but no one is to blame. That's the way the ink splashes.

Some of the best known of freshwater trout books

have been written about very small areas, but it happens that such trout fishermen are the greatest readers in the fishing world, and have a sort of literary cult of their own.

Until the recent years of the bass boat and the patched jumpsuits, black bass fishing wasn't very well recorded. Now there's a virtual flood of black bass books by black bass experts who never wrote books before, as well as some by general fishing writers who have jumped on the wagon. Most of them are pretty comprehensive, although they're often repetitive. I doubt if any of them will become classics, for the obvious reason that bass authors never seem to get very esthetic; they leave out the wonders of nature and tend toward deliberate hill-billy expression. As I've mentioned before, a rainbow trout is likely to be recorded as a "shard of gleaming color" but a bass comes out as a "hawg."

Shopping for fishing books tends to be a mail order affair. Some of the very best bookstores may have a few you can study on the shelves before digging for a wallet, but I'd guess most of the fishing books that are sold are either through book clubs or as straight mail orders. Only in the larger cities are sporting goods stores likely to offer anything like a comprehensive selection of outdoor stuff.

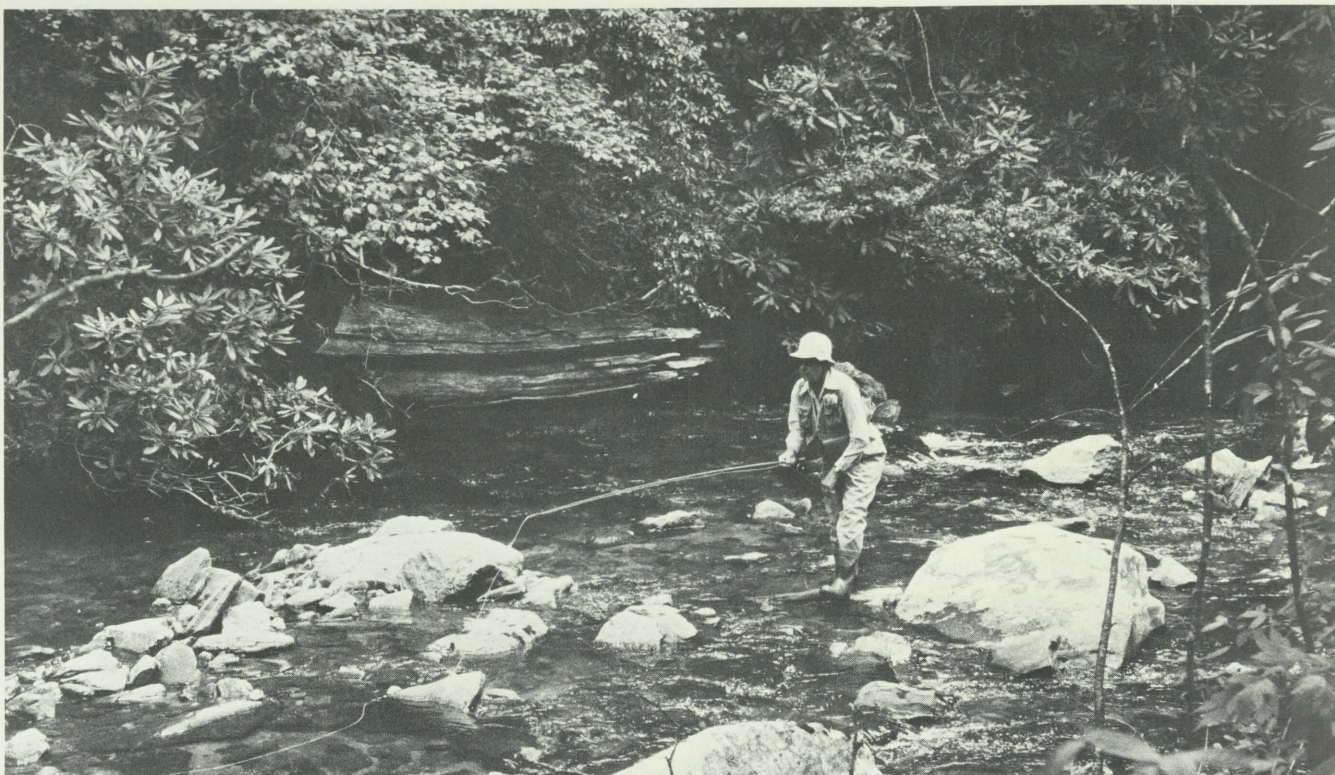
I do know that many mail orderers are unhappy with what they get, often because they don't study the advertising very carefully, and don't bother to check the book review columns that appear in many sporting publications.

Book titles are decided on in wondrous ways by groups of people at long tables, and some of them are misleading. Of late, if I'm seeking pure information, I have become very skeptical of fancy titles. Take two recent names: One is *Sportsfishing For Sharks*, a good job on exactly what it advertises. The other is *Fly-Fishing Heresies*, an equally good book but one that is probably sold mostly to people who read the advertising very carefully or who know of the author and guess what he's going to do.

Lately there is a rash of anthologies, books made up of works by several authors, each of whom does a chapter, generally on his specialty.

I have written for more than a dozen of these recently, and view them with mixed emotions. The danger is that there may be a dozen or more subjects, only one of which you're really interested in.

(continued on next page)



North Carolina trout streams are among the most scenic in the nation. Above is South Mills River near Brevard.

(continued from preceding page)

Such books are poor places for learning anything revolutionary. Most of the chapters are buildowns of things the writers have done previously. That sounds bad to begin with, but a summary may be what you're after. Anyway, if one guy turns you off, you can just flip to the next chapter.

Book shopping requires some thought and possibly a little study.

IT VARIES WITH THE KIND OF water involved, and no two lakes are exactly the same, but the biologists are beginning to come up with something resembling a timetable regarding the drawdown project for improving fishing. In some respects it resembles the timetable for artificial impoundments, which have a history of fishing boom and bust. When fishing levels off after a few years, it appears worse than it really is in comparison to the days of glory.

One of the best examples at present is Lake Tohopekaliga, near Kissimmee. Fishing hasn't been too good there this year, but that follows some of the finest fishing in the state, which had lasted for some time.

If Lake Toho is a typical example, it indicates that the drawdown put in effect there some time back has a worthwhile effect for about 5 years. Immediately after the water went back up after the drawdown there, fishing began to improve until it was widely stated that Toho was the hottest spot in Florida. It seemed to begin fading in the winter of 1976.

Another drawdown project is to involve Lake Kissimmee, located farther down the Kissimmee River toward Lake Okeechobee. That one is to begin around the end of this year and it will involve putting a temporary plug in the river (now more of a canal as a result of dredging) in order to hold water in up-stream areas.

THERE'S A LITTLE PATCH OF freshwater trout fishing in northern Georgia, but I usually recommend North Carolina to someone wanting a bit of it within a day's drive of Florida. Late spring and early summer are the best time. After that you tend to run into low and warm water, and the fishing suffers badly.

Late in the spring of 1976, we did some fishing in the Brevard, N.C. area. That's just south of the Blue Ridge Parkway, and presents about the finest of eastern mountain scenery. The fish were small but plentiful, and we caught them mainly on dry flies.

There's a variety of trout water near Brevard, and a variety of regulations to go with it. In some of the "wild" trout sections, fishing is with flies only, and sometimes the size limits just about wipe out any chance of a "mess of trout." If you want to be reasonably sure of eating fish, you'd better go to the streams regularly stocked, where anything from a spinner to a kernel of canned corn is likely to catch something that may not be very smart but certainly is a trout.

For that matter, I think the day of taking wild trout for the table is pretty well gone. Most of the

serious trout fishermen I know seldom, if ever, bring in a fish. In both East and West we now have "trophy water," where only a fish of taxidermy size is taken home. When we fished the Letort (Pennsylvania) in May, we found the keeper limit was 20 inches. That's quite a trout, but the Letort is quite a place; a world-famous center for "technical" trout fishing, where it's quite possible you'll go all day without catching a fish, despite frequent sightings of really big brown trout. Killing a Letort fish seems murderous.

SPOUTING OFF in the April column about the Nile perch, a proposed import that has been tried a bit in warm American waters; I stated I hadn't heard of the fish being caught on artificial lures. Well, I have now.

I never fished for the big African, but it seems some readers have, and I've heard from two or three. One of them, L. E. Newman, of Venice, says his party caught 20 pounds on plugs, and that many of more than 100 pounds have fallen to artificials in Africa.

A CONCLUSION CONCERNING hyacinth control that you may not have thought about:

The best control methods are almost continual. In other words, when the plants are killed while quite small, there is less problem from bottom sludge, and the sum-total of plants to be destroyed is smaller. When the plants get a long start and appear in enormous rafts, they not only clog waterways and keep the sun off great expanses of water, but provide an unwelcome abundance of residue when killed and allowed to sink.

But continually patrolling with a spray unit or mechanical harvester is an expensive proposition. We still don't have the answer, just more ideas.

STRIPED BASS, ALWAYS AN UNKNOWN quantity to some extent, because they live in both fresh and

The new sunshine bass, below, isn't going to get as large as the striper, but 5-pounders won't be uncommon either.



salt water and have a carefree habit of going from one to the other without announcements, seem to be doing a little better in some Florida areas.

The upper U.S. East Coast has fallen upon hard times in the striper business. That's especially bad news because history shows that there have been long periods when the striper was completely absent from long stretches of coastline.

There have always been striped bass in the St. Johns River, and the Game & Fresh Water Fish Commission has been planting fingerlings there with regularity although unable to check accurately on the effect. Last spring there were a great many small stripers (around a foot long) being caught in the upper St. Johns, and although those aren't keeper fish they're an optimistic indication. Fish of that size have made it on their own for a year.

The sunshine bass (cross between the striper and the white bass) is doing well. Although it is unlikely to attain the size of the largest stripers, it appears that 5-pounders won't be unusual. Observers are pleased to note the fish are being caught on both live bait and artificials. Forrest Ware, research coordinator, is especially happy over the new fish's preference for gizzard shad as a food fish.

The sunshine bass is not a cover seeker like the largemouth, but it is often found in deep holes and seems to prefer moving water.

A REEL REPAIRMAN once told me that such-and-such a spinning reel was the best buy on the market. Oh, it was a lousy reel, he said, but there were so many sold and so many breakdowns that everybody had parts. When it broke, you could get it fixed, and every tackle dealer knew what parts were most likely to go first.

The parts business is complex for several reasons. For one, some manufacturers and importers demand a minimum order of parts from a dealer. So if your Whuzzit reel needs a screw for the endplate, maybe the dealer will have to buy \$10 worth of things to get it for you. If he hasn't been selling your particular brand of reel, he's faced with a dilemma: making you mad by charging too much, or making you mad by refusing to work on your treasure.

The truth is that it's often possible for the individual to get much better service by going directly to the factory for it. Wails from individual fishermen are likely to receive more prompt attention, evidently going through different channels that are more cognizant of public relations. (Some dealers will tell you frankly that you can get better service than they can.) This doesn't apply where the dealer handles a large quantity of an item, but it does apply in a case where the gadget you take to him is something he doesn't ordinarily sell.

The stumbling block for most of us is that we despise the task of packaging a reel or other equipment and going through the hassle of sending it. ●

the use of lead shot for waterfowl is probably on the way out

The Case For Steel Shot

FOR ENDLESS WEEKS, it seems, the Florida countryside has simmered in the heat. Then one day there slips up on us a first subtle break in summer's grip. A bit of a drop in the humidity and an easing of the temperature, perhaps. Or maybe it's the sight of a little knot of blue-winged teal springing from a tidal pool in a railbird marsh that gives a hint of more moderate days to come. Many a Florida outdoorsman will sniff the breeze, fresher now somehow, and declare there's a definite feeling of fall in the air.

Whatever triggers it, this change of season in the offing will start any number of Florida waterfowlers thinking in terms of the forthcoming hunting season. One question that is foremost in their minds is, "What can we expect in the way of duck numbers this season?"

The size of North America's duck population is closely tied to the amount of surface water available on the major nesting grounds in the prairie-parkland country lying east of the Rocky Mountains in Montana, the Dakotas, and Minnesota northward into southern Manitoba. During years when there is plenty of surface water in the duck factory area, there is a good crop of "new" birds to join the flocks

on the autumn migration. Conversely, during dry seasons there are fewer recruits to take to the air on their first southward passage. During the past two decades, the fall population of ducks in North America has varied from a low of 77 million in 1961 to a high of 120 million in 1957. These figures do not include sea ducks and mergansers.

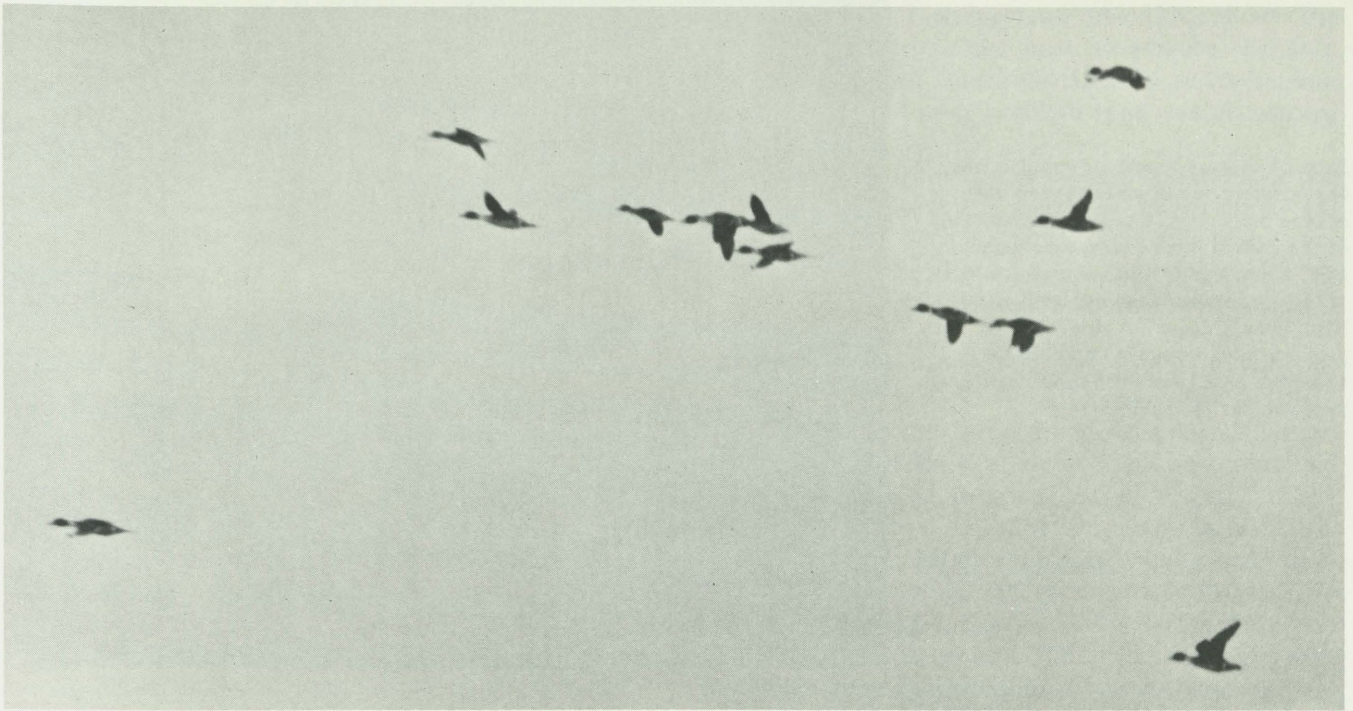
The harvest of ducks in the U.S. averaged 12 million a year between 1965 and 1972. In addition, an estimated 3 million birds were downed but not retrieved. The Canadian harvest took 4 million a year during the period, and Mexican hunting a half million. This means that roughly 19½ million ducks are cropped from the continental population each season.

But nesting success and the harvest by hunters is not the complete picture. It becomes apparent, when seasonal population figures and hunting mortality are considered, that there is a significant additional drain on the waterfowl population from other sources. Nonhunting mortality removes from 20 to 25 million birds a year, according to the calculations of the specialists. Disease, unusually severe weather, predation, and oil and pesticide pollution



A heavy annual seeding of favored duck concentration areas with expended lead shot—about 6 million pounds over the nation—takes a substantial toll of waterfowl. How many new recruits join the southbound flocks each fall depends to a great extent on the availability of water on the duck factory areas of the prairie-parkland area of northern U.S. and southern Canada. Over the past 20 years the duck population, exclusive of sea ducks and mergansers, has varied from 77 million to 120 million. Ducks pick up spent shot while they feed. Depending on a number of factors, even one single ingested shot may set up a fatal reaction.

By MORRIS SHAW



are among the mortality factors that have been identified in various instances of notable waterfowl losses.

Occasionally there occurs a type of mortality that "does in" a substantial number of birds in a relatively small area within a short period of time. Those periodic outbreaks of botulism that rack up the birds in windrows on the western duck marshes, for example. But for the most part, losses from causes other than hunting go all but undetected, or at least pretty much unheralded, marked as they most often are by a scattering of dead or afflicted birds spread out over a large area and occurring over a prolonged period. The result is that seldom does an individual observer see any notable number of dead birds.

This is the case with lead poisoning, which has long been recognized as a factor in waterfowl mortality. As early as 1919, it was noted that lead

poisoning was causing loss of a considerable number of birds annually. In a study reported that year, it was stated that mallards, black ducks, pintails, canvasback, and whistling swans were commonly poisoned by ingested lead shot.

Waterfowl feeding on the bottom of wetlands or in fields all too frequently encounter and take in lead shot pellets. Possibly they are swallowed accidentally, mistaken for food, or perhaps taken in as grit. At any rate, in the gizzard the shot are subjected to grinding and corrosion. This action reduces the lead to a soluble form which is picked up by the blood stream and transported about the system to be absorbed by various organs.

At first flush it seems a bit far out to many of us dipped-in-the-mud hunters to believe that there is enough shot lying about the country's marshlands

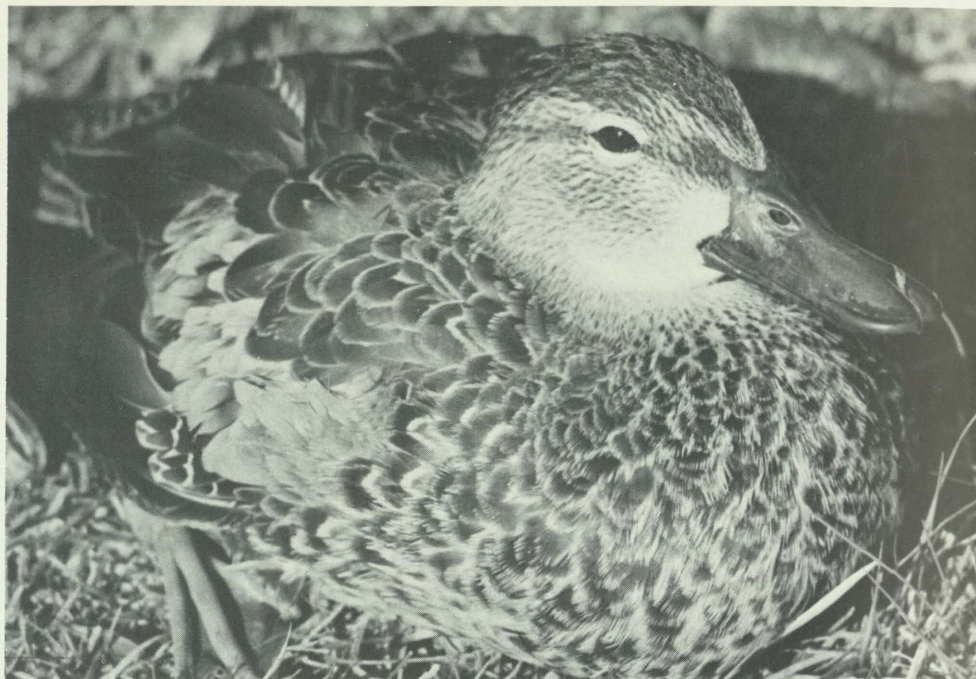
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Photos By Wallace Hughes



Loss of ability to walk or stand is one of the symptoms of an advanced case of lead poisoning. A significant portion of the annual non-hunting mortality of 20-25 million waterfowl is the result of lead poisoning from ingested shot. Even heavy "doses" of steel shot do not produce adverse affects and appears to be the best answer to lead poisoning problem at this particular time.

Photo By Lovett Williams



(continued from preceding page)

to make much difference. Applying simple arithmetic to the findings of some duck hunter surveys, however, it turns out that U.S. waterfowlers are scattering some 6 million pounds of shot around the hunting grounds each season. Even that doesn't sound too menacing when you consider it's a pretty fair-sized chunk of country that is being seeded.

But it's not every little pond and marsh that attracts enough fowl to be of interest to a whole lot of hunters and thus become heavily loaded with expended shot. It's the major concentration places where the problem is most acute. Here food and resting and loafing grounds and other attractions—fresh water in coastal areas, for example—lure birds to stop over for a period. When a duck marsh has been heavily shot over for years, a migrating bird pausing to feed and rest there for even a few days has a pretty good chance of picking up some stray lead during feeding.

In a recent impact statement on the use of steel shot versus lead shot in hunting waterfowl, the U.S. Fish & Wildlife Service reported, on the basis of a number of studies, that a concentration of one pellet per 2 to 3 square feet seems to be a common occurrence in shooting areas. There have been some concentrations greater than one pellet per square foot.

There is no significant difference in the sinking rate between heavier shot (number 2 to 5) and lighter shot (6 or 7½). Even shot deposited on soft bottoms apparently does not always settle out of the reach of waterfowl, that is, below the top inch or so of the bottom. As an example, a 1975 report on selected areas in Alaska noted that "... it is surprising that pellets remain from previous years on the Hay Flats. Many of the bottoms there are soft, and the entire

area is flooded by high tides several times each year."

With this much shot exposed to feeding waterfowl, there is little wonder that a significant percentage do manage to ingest some quantity of lead.

Biologist Frank Bellrose examined more than 35,000 duck gizzards during a 1950s study. Some 6.7 per cent of the gizzards he examined contained lead shot. The percentage varied among species, with buffleheads, green-winged teal, mergansers, wood ducks, shovelers, and gadwalls showing 2 per cent carrying ingested shot, whereas canvasbacks, lesser scaup, redheads, and ring-necked ducks ranged from 12 to 14 per cent. The difference, it was deduced, related to the feeding habits of each species, as well as the availability of pellets in the habitats of each.

At specific locations, almost 100 per cent of the ducks present may have at least one lead pellet in the gizzard. This is sufficient to cause death under some conditions.

The amount of lead absorbed through the digestive system and deposited in the wingbones of waterfowl is a measure of the amount of shot ingested by the bird. In studies conducted in 1972 and 1973, it was found that lead levels were highest in the Atlantic Flyway and lowest in the Central Flyway. It is estimated that the annual nationwide loss of waterfowl due to lead poisoning is 2 to 3 per cent of the fall population.

The impact statement prepared by the U.S. Fish and Wildlife Service says, of the effect of shot on birds, that the toxic action lead exerts in the system is the disrupting of the action of the enzymes, the biochemical 'trigger' that affects various bodily functions. For example, by interfering with the production of hemoglobin, lead-poisoned waterfowl develop increasingly severe anemia, with a number

of associated symptoms and effects. The liver may cease to function properly, and certain muscle fibers shrivel and erode away or become nonfunctional.

The result is that birds thus affected are certainly less able to deal with the rigors of life in the wild, being more vulnerable to predation and disease, less able to cope with severe weather, and, being less alert, are certainly subject to disproportionate hunting mortality.

Waterfowl with a well-advanced case of lead poisoning are thin, suffering up to 40 per cent loss of their original body weight, and exhibit reduced activity with reluctance to fly, lowered food intake, wing droop, bile staining of vent area, a tendency to seek isolation and cover, and loss of ability to walk or stand.

Lead is stored in bones of waterfowl and may be present in varying amounts, depending on several factors. Continuous low-level oral doses of lead over a long period may result in the highest levels in bones, lower levels in liver and kidney, and still lower levels in heart, lung, muscle, and brain. High levels of lead in the liver and kidney are indicative of recent high exposure to lead. High levels of lead in bone also can result from a single acute exposure to lead.

A number of studies have been made to determine whether ingestion of steel shot would produce any of the symptoms associated with lead poisoning. Ducks receiving up to 64 number 4 steel shot showed no adverse effects. Despite some disadvantages, steel shot currently appears to be the answer to the serious problem of lead poisoning of waterfowl.

Since lead is a more dense material than steel, lead and steel pellets of the same size, fired at approximately the same velocities, will have different striking energies, lead being superior. In shotshells it is possible to compensate for this difference in density by increasing the size of steel pellets. A number 4 steel pellet corresponds in weight roughly to a number 6 lead pellet, and this tends to reduce somewhat the gains associated with the increased pellet size. The amount of reduction is less with steel than with lead shot because steel shot emerge from the barrel as perfect spheres, while lead shot do not. Therefore, because erratic flight of deformed shot is reduced, steel shot loads generally retain pattern density better than lead shot loads.

Since steel shot are much harder than lead shot, and require a different powder, an important question is whether steel loads will cause damage to the barrels of guns in which they are used. Three types of barrel damage have been of concern in the use of steel shot: wear (scratching or erosion), choke deformation (dimensional expansion of the choke), and split or burst barrels.

The problem of barrel damage with steel shot appears to be primarily one of dimensional changes at or near the choke—a so-called expansion. The

introduction and widespread use throughout the industry of a protective liner to enclose the shot charge in modern shotshells appears to have eliminated the barrel wear problem that was of concern in earlier years.

Test results from the arms and ammunition industry indicate that the degree to which choke expansion occurs with presently available steel shot loads varies with different types and makes of shotguns. These tests show that with modern, American-made single-barrel shotguns of good quality, choke expansion either has not occurred or has been sufficiently slight as to have had no measurable effect on gun performance. In a few double-barreled shotguns tested, results similar to these were obtained with some, but in others, somewhat more choke expansion occurred—significantly more in one case, up to .017 inch, inside diameter. Choke expansion on the order of .002 to .006 inch is variably reported to be visible, appearing as a slight ring bulge on the barrel near the muzzle. These results were with full choke guns. With modified barrels, considerably less expansion of chokes was detected.

It is understood that split or burst barrels usually result from the discharge of shot into an obstructed barrel, although barrel burst can also occur as a result of too strong a charge for the strength of the barrel.

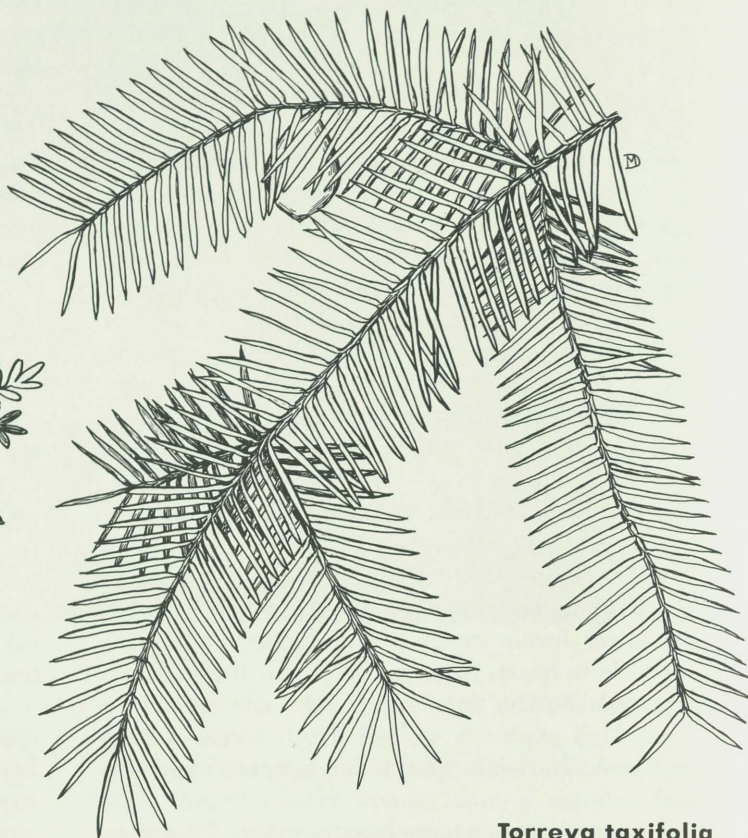
Whether barrel bursts may occur more frequently with steel shot than with lead shot ammunition, is unknown. It is reported that about 1,000 barrel bursts occur in the United States annually with lead shot ammunition. There are indications that a greater proportion of the bursts may occur with the heavier loads commonly used in waterfowl hunting than with lighter field or target loads. It will be difficult to determine whether there is any increase in the number of barrel bursts with steel shot. It is noted, however, that since steel is harder and less plastic than lead, more stress would be induced by any barrel obstruction.

Although testing has been done by the ammunition manufacturers to determine the suitability of different types of shotgun barrels for use with steel shot, information is not available for all makes and models of guns currently in use for waterfowl hunting. It may be possible to obtain current information on specific guns by writing the manufacturer. If your current duck gun is an older model, it might be prudent to buy a single-barrel gun of modern manufacture for use with steel shot.

Details were not available at press time, but it appears that regulations on federally-managed waterfowl hunting areas in Florida will permit the use of steel shot only, during the upcoming season. It will take time, but, eventually, with widespread adoption of the steel-shot-only regulation for waterfowling, the significant yearly drain on the waterfowl population by ingested lead shot should be eliminated. ●



Wart-cress



Torreya taxifolia

FLORIDA STATE UNIVERSITY'S HERBARIUM

THE FLORIDA STATE UNIVERSITY herbarium at Tallahassee, is not an exciting place—just a large room crammed full of filing cabinets containing thousands of folders filled with dried specimens of plants. But when one talks with the director and curator of FSU's herbarium, Dr. Loren Anderson, the room comes to life.

For example, one of these specimens is *Coronopus didymus*, commonly called wart-cress or swine-cress. This handsome, dark green weed was causing a problem last spring for dairy farmers in some parts of Florida, particularly in the panhandle and in Dade County. The dairymen complained to Gene Smith, supervisor of the State's Dairy Products Inspection Division, that their cows were eating something which caused their milk, when pasteurized, to smell like "wet dog" and have an unpleasant taste.

The problem being undetectable in raw milk, the farmers had to pasteurize small quantities of each load for testing, and dump the rest, if the offensive odor and taste appeared. It was an annoying, expensive, and time-consuming procedure.

To identify the plant, Smith went to the herbarium to talk with Anderson. Fortunately, the curator remembered a similar incident in another state, and recognized the culprit. Smith says, "Dr. Anderson showed me a patch of wart-cress on the campus, and prepared a pressed specimen which I was able to show to dairymen. It seems that the cress grows mainly around the edges of the grazing land, near fences, and during dry periods, when lush, green grass is scarce, the cows eat the hardy wart-cress.

The director of the State's Division of Dairy Industry, Jay Boosinger, expressed his gratitude in a letter to Dr. Anderson. It reads in part, "We are acquainting our various inspectors with this particular weed, and they are alerting dairymen to be on the lookout. . . . Without your valuable assistance, we would not have been able to bring the off-flavor situation under control as quickly as we did."

Of what other importance to Florida is FSU's herbarium besides being of practical help as in the case of the dairy farmers?

Perhaps of first importance is the fact that it

houses an extremely valuable collection of plants of Florida, the Southeast, and tropical America. Since its organization in 1940, and its spurt of growth since 1954 under the leadership of Dr. Robert K. Godfrey, now curator emeritus, the collection has grown to 146,000 specimens.

Botanists from many states, and some countries in Europe and Asia, have visited the herbarium over the years. Recent visitors were Drs. Peter Taylor, from the herbarium in the Royal Botanical Garden

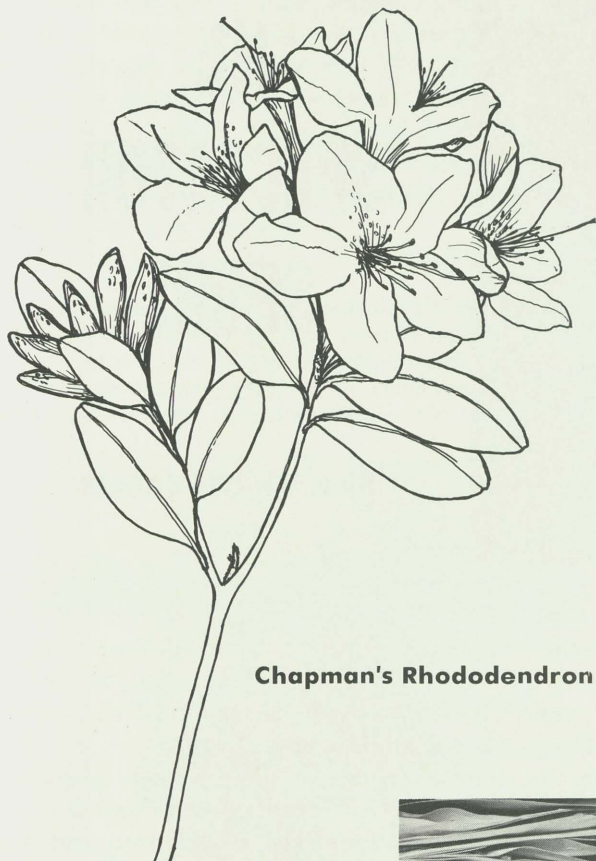
of Kew, United Kingdom, and Beryl Simpson, from the Smithsonian Institution, in Washington, D.C.

The herbarium boasts 2,600 species from the Florida panhandle alone—equal to the total number found in many states. "It is the richest area in the United States," says Loren Anderson. "There are some plants found here that are not found anywhere else in the world." One is *Harperocallis flavia*, a new genus of lily, named for the famous botanist of the late 1800s, Roland Harper. The plant was found in Franklin County by Sidney McDaniel, a graduate student at FSU.

Two other rare and interesting plants, among the many found in the panhandle, are the *Torreya taxifolia* and *Rhododendron chapmanii*. Both are endangered species.

The herbarium collection is especially useful for ecologists, conservationists, agriculturists, biologists and naturalists, and is an invaluable tool for those who teach a wide variety of botanical subjects. It also serves as a reference for practicing field botanists, and is indispensable in preparing environmental impact studies in the state. In addition, the collection can be used to indicate the spread of noxious weeds, and to identify newly-introduced species that might become serious threats to agriculture.

Presently Dr. Anderson and his staff are working on a manual of plants in the panhandle, and on a guide to the vascular plants of Florida (vascular plants are all flowering plants, pines, and ferns). Dr. Godfrey, meanwhile, is preparing a manual of all plants in the wetlands of the southern United States. ●

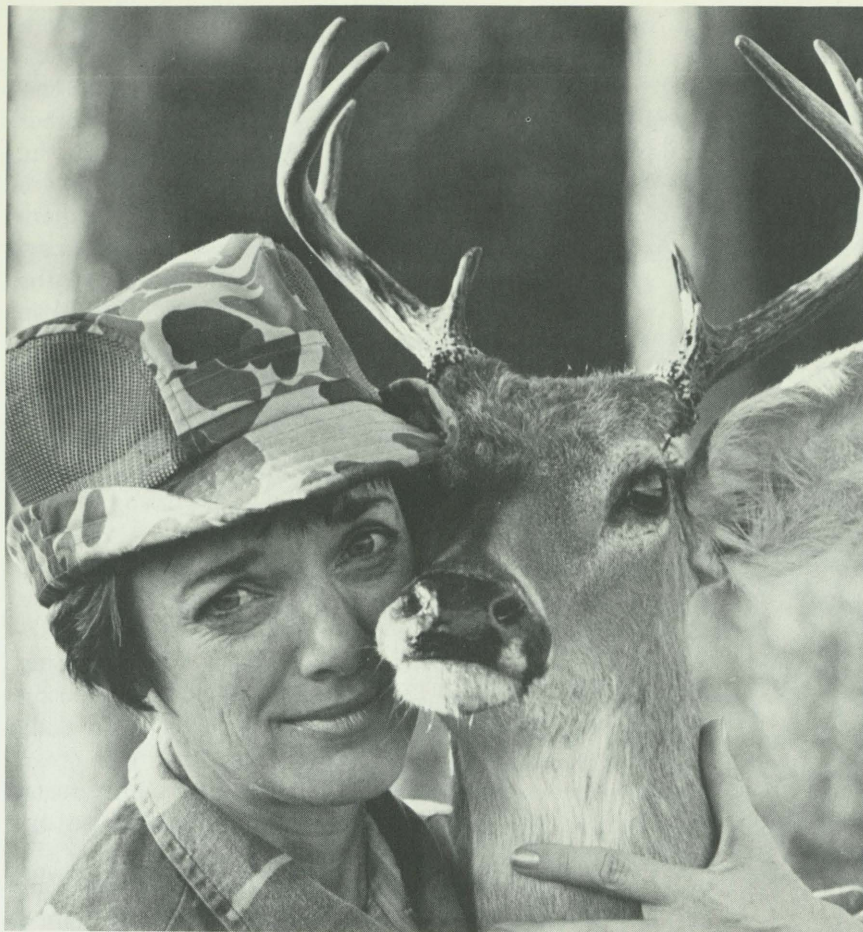


Chapman's Rhododendron

Drs. Beryl Simpson (left), of the Smithsonian, a recent visitor to FSU's herbarium, and Loren Anderson, director and curator, examine a specimen of *Torreya*, or stinking cedar. The tree is found chiefly on the limestone bluffs along the Apalachicola River where it's generally scattered and rare. The tree gives a disagreeable odor when it is bruised, hence its common name.

By SABINE EHLERS





the author becomes a hunter
without once pulling
a trigger

HUNTING'S NO SPECTATOR SPORT

By KATHRYN BARLEY

IS HUNTING A SPECTATOR SPORT? That's what I asked myself that day when my husband, Kim, said, "Why not hunt with us this year? You don't have to carry a gun, or shoot any game. Just come to be with us."

Goodness knows, I was no hunter. I would take the animal's side in any dispute with a sportsman. But I remembered the atmosphere in our home the year before as each weekend approached and excitement mounted while Kim and our three sons, aged 14, 12 and 9, packed their gear and planned their strategy. Just watching them hunt might be fun.

I agreed to join them and we drove to their hunting camp on a Friday, the eve of bowhunting season. The camp was located three miles beyond what seemed to be the last outpost of civilization, a service station in Holopaw. We drove down 3 miles of clay road, alternately washboarded and potholed, then we bumped along several hundred yards of Deseret Ranch's old Dixie Highway. An abrupt turn, a wait while a gate was closed behind us, and we were surrounded by pasturelands. We followed a trail which bridged a small pond, where I spied an alligator. Finally we rounded the last bend. We were truly in the deep woods.

"There it is, Mom," cried Chris. He was filled with excitement.

We halted beside an old deserted bus devoid of any

wheels, its seats replaced by fold-down canvas bunks, its every window cracked. "But they're all air tight," Kevin assured me, proud of the camp's bedroom, its only indoor space.

Beside the bus in the shade of a large grapefruit tree a lean-to sheltered a table, bench and a wood-burning brick stove topped by a blackened grill. The stove was useful, 9 year old Chris explained, for drying out wet boots and for keeping food and people warm.

The only electrical convenience in the camp, other than six bare light bulbs which Kim had strung, was an ancient refrigerator. And finally, way in the distance was an honest to goodness outhouse which made the hunter's castle complete.

I saw the pride shining in Kim's eyes but still I couldn't resist. "For this you pay \$1500 a year?"

Kim shook his head. "That's for the privilege of hunting on the 60,000 acres of land. Finding the bus was pure luck. I bought it outright."

I deliberately swallowed my astonishment. "Well, it looks very," I nodded my head searching for a suitable word, "rugged."

Kim beamed. "Yeah!"

The next morning I awoke in the dark bus at 4:15 and shifted to one side on the hard cot. Then I smelled coffee and noticed the yellow haze in the lean-to. A mixture of bug light and smoke. I heard the sizzling of bacon frying and the hushed mum-

bling of the children as they fed wood into the fireplace and loaded gear into the jeep.

I scrambled into my clothes, stumbled through the darkness to the outhouse, and then huddled near the fire for warmth. I ignored the smoke, and stuffed myself with biscuits, bacon, eggs, swamp cabbage and potatoes, delicious eaten in the outdoor air.

"Load up," Kim said and we all piled into the jeep. The beams of our headlights crawled across the vast pasture for the next thirty minutes. Then we drenched ourselves with mosquito repellent and trudged blindly across a newly plowed field, where my unbooted ankles behaved like jello. The boys dispersed into the darkness and Kim led me to a spot beside a bush. There we sat down on the cold ground. "Shhh," Kim whispered. We sat there in the dark and waited for dawn as clouds of mosquitoes noisily swarmed about us.

I was a Bambi lover, opposite page, but I knew I could no longer condemn killing deer, unless I became a vegetarian and also condemned killing cows. Camp scenes, below, show bus body that was our camp home, Kevin with his first turkey, and Kirk rolling out at 4 a.m.

One hour and 15 long silent minutes later, Kim nodded toward a head (island of trees) now visible before us. "Watch right there." After that I barely blinked an eye. Thirty minutes later Kim stood up and whistled for the boys. "No deer here," he said. "Let's go."

I sighed. I felt as if I'd been holding my breath in anticipation ever since 4:30 that morning.

We hunted at one head after another. Then before noon Kim and I sat behind a crepe myrtle bush at a deer crossing to wait while Kirk walked through one of the islands of trees to flush out any hiding deer. I peered from behind the bush. I expected to see a deer at any moment. One hour later Kirk appeared and shrugged helplessly.

"Oh, come on now," I said. "Where are the deer?" I was distressed.

"Don't worry," Kim said as he started the jeep. "We'll find them. Just be patient. This is only our first morning out."

It was now afternoon. We had hunted for 8 full hours and I had yet to see my first wild animal.

(continued on next page)

Photos By Kathryn Barley



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We returned to camp, had a quick lunch, a quicker nap, and then headed back out. The afternoon proved as unfruitful as the morning, though we hunted until darkness forced us in. After dinner we collapsed into bed. I lay in my cot almost too tired to sleep, still somewhat dirty and sooty because of our rationed bottled water, and thoroughly disappointed.

I had expected to see herds of deer. Of course I knew that last year Kim and the boys had hunted hard all season long to bag their limit of only two deer each. Now I understood why. Deer were hard to find. I vowed I'd be more patient.

The following morning Kim and I groped our way through moonlit darkness to a head where Kim secured a tree stand. He then helped me climb up. I sat absolutely still. I was soon overwhelmed by sleepiness. But I fought to stay awake. I forced myself to study the activities of a lazy lizard, to keep track of a distant armadillo and to blow steadily at the swarming mosquitoes, but all to no avail. Soon I nodded again.

This time I slipped. I clawed the air frantically. I scraped my arm against a nearby tree, then caught myself. I regained my perch. But still I could barely hold open my eyes. Only the anticipation of the abrupt appearance of a deer could sustain the alertness I'd experienced the day before. And I couldn't revive that anticipation. Yesterday's hunting results had destroyed my faith.

However, late that afternoon my faith was restored. Kim and I were waiting just outside a U-shaped head while Kevin, Kirk and Chris all three plunged through the palmettos and pine trees to scare out any deer. Suddenly a deer darted out in front of us.

"Ohhh, look," I crooned, "it's just a baby," but Kim stood up, pulled back his arrow and zinggg. "Kim, stop!" I demanded. Then I sighed with relief as the arrow missed its mark.

Kim jumped down from the jeep. "It's a buck," he said in a low voice and then ran, knocking another arrow. I shook my head in disbelief. That deer was so little. Why, I'd expected an animal the size of a moose. The buck sank down into the high weeds to hide just as Kim shot again. This time Kim's arrow struck his quarry, but it trotted away towards the head. I wanted to cradle him, to comfort him in my arms. Don't be foolish, I mumbled to myself. That wild animal would kill you, given half the chance. But my heart refused to listen.

The arrow had struck an artery, and soon the deer collapsed, dead. Kim asked me to help while he field dressed the deer. I balked. But it was growing dark and Kim needed help. He and the boys killed only animals they intended to eat. I couldn't refuse. So with the tips of my fingers I steadied one hoof and averted my eyes while Kim made the incision.

When I heard a sound like that of ripping canvas,

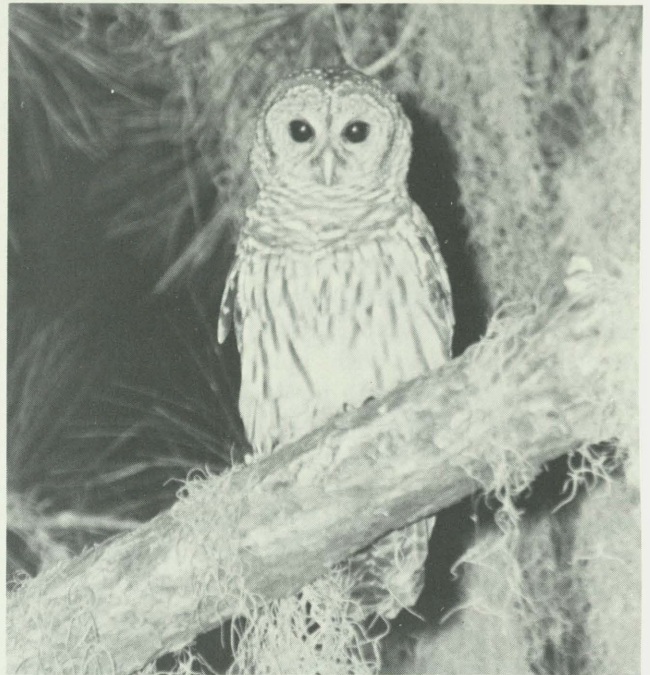


Photo By Lovett Williams

curiosity tempted me to watch. Slowly, almost bloodlessly, that deer was transformed into venison, just, I thought amazed, as a cow becomes beef. I was a Bambi lover but I knew I could no longer condemn killing deer unless I also condemned killing cows and became a vegetarian.

I couldn't do that. But I, myself, wanted no part of creating this transition from beautiful animal to edible meat, so for the remainder of bow hunting season, I stayed home.

As rifle season approached, Kim urged me to accompany them once more. "You could hunt with your camera," he said. At first I refused, remembering that dying buck. Yet I realized hunting with a camera would be different. Anticipation of my own shots, not kills but snapshots of wild animals at close range, would keep me alert during the long, silent waits. My game would be unrestricted. Now my interest quickened. I could shoot those clever raccoons, the colorful butterflies, and even the spiders with their frosty, early-morning webs. Finally I agreed to go. Then I eagerly prepared for my own wild game hunt.

During the afternoon of the first day Kim spotted a group of boar hogs, unsuitable for shooting. "Hey! You can get a picture of this," Kim cried. As the boys leaped from the jeep, ran through the tiny head, and flushed out the hogs, Kim raced the jeep cross-country, oblivious of the small weed-covered drainage ditches we bounced over. I was afraid, but I was even more determined to capture on film these wild creatures which now ran beside us.

"When we head them off, they'll freeze," Kim yelled. "Get ready to jump!" He slammed on the brakes, and I leaped out, focused my camera on the pigs, and snapped away, as proud of my shots as any gun-toting hunter ever was of his own.

When we reached camp I was glowing with pride. Then I opened my camera and found it empty. Oh, no! I had been "taking pictures" with no film. That wild, dangerous ride to capture the hogs had all been useless. I cried out in despair, but shining through my disappointment was the memory of the day's excitement. I had tasted success, and I knew I'd not soon forget my film again.

The delicious dinner more than compensated for our temporary fatigue and sore muscles. Kim had cooked country-fried morsels of venison backstrap and gravy, and from a black iron skillet he'd produced sourdough biscuits. Now I leaned back, relaxed and let the tension run out of my body, and listened while the boys exchanged stories around the fire.

Today a turkey had actually answered Kevin's call and walked up into view. Young Chris had the thrill of sitting perfectly still as a hummingbird fluttered its wings against his cheek. And Kirk, waiting for a deer, had been determined not to move in spite of a snake beside his boot. In my sleepy state I mused that these were experiences they wouldn't soon forget.

During the next two weekends, Kirk downed 2 deer and Kevin, 1. Their luck surpassed my own, for the distances in the wilds had proved deceptive. Pictures taken with my 35mm fixed-lens camera showed only pinpoints of color where animals should have been. My best shots might as well have been misses. I gave up and swore that after that I'd stay home.

However, after only one weekend at home, I rejoined the hunters, lured by tales of what I'd missed. Chris had stalked a snorting, stamping buck right

out in the open field. Kevin spied a fawn who then hid by placing only his head behind a nearby tree. And they all roared with laughter when Kirk told of the owl who discovered Kim at dawn. He mistook Kim's white face for a rabbit and swooped down to carry him away. Kim flapped his own arms and shouted and the baffled bird fled.

Now I was eager to be a participant in their life in the wilds as I climbed into the tree stand on the edge of a head and sat all alone, facing a dirt road and the fenced section of pasture beyond. But the hurry up and wait could not be avoided. And today's wait was almost unendurably prolonged by fog.

Just when I thought I could not sit there without moving for even one more minute, the deer soundlessly materialized from the fog as if by magic. There in front of me, just beyond the fence stood a buck and two does, beautiful wild creatures. In utter silence one doe crawled under the fence then disappeared around the head. The other doe followed 10 yards behind. She darted looks in every direction. Then she halted and glanced back as if she were communicating with the buck which stood, still motionless, behind the fence. Suddenly I heard the hooves of the first doe returning. The second jerked her head up, then turned and fled. The buck jumped the fence and the three deer roared away. Their hooves pounded on the dirt road with the force of thunder. Then they were swallowed up by the fog and silence again descended.

I closed my mouth and released my breath. What a beautiful sight! I jumped off the stand and hurried to find Kim.

"Was that worth waiting for?" Kim asked later.

I grinned. "Those deer were gorgeous. I wouldn't have missed seeing them for anything in the world." It had been worth every minute of the waiting which I'd begun back in September. But I admitted to myself that a repeat performance wouldn't be worth even a one-weekend wait. Not because the rare sightings were unremarkable but because the remarkable sightings were too rare to be the rewards of a spectator.

A spectator needs action to watch. She can't observe a hunter's anticipation; she can't watch his controlled excitement; she can't view game through his scope or anticipate his moves. Hunting, I decided, didn't even resemble a spectator sport.

Hunting was many other laudable things—a lesson in ecology, a studio for fashioning fine character, a factory turning out enduring memories. But hunting was no spectator sport.

Nevertheless, the camaraderie accompanying the sport is so beautiful, the escape it provides so complete, that hunting still holds a tantalizing charm for me. Perhaps if I, too, learned the animals' habits, if I, too, laid some entrapment plans . . . who knows? Next year I may don my camouflage gear, arm my new camera with a telephoto lens, and become a hunter of wild animals again. ●

Meat in the pot is certainly not all there is to hunting—not even the most important to a true sportsman. It's the sights and sounds of the back country that add the highlights to the thrill of the chase. The barred owl, left, is one of the background music makers of the big woods. The sight of an alert deer checking back track, below, is example of inside peek at the private lives of wild creatures to be enjoyed by the observant hunter.

Photos By Wallace Hughes



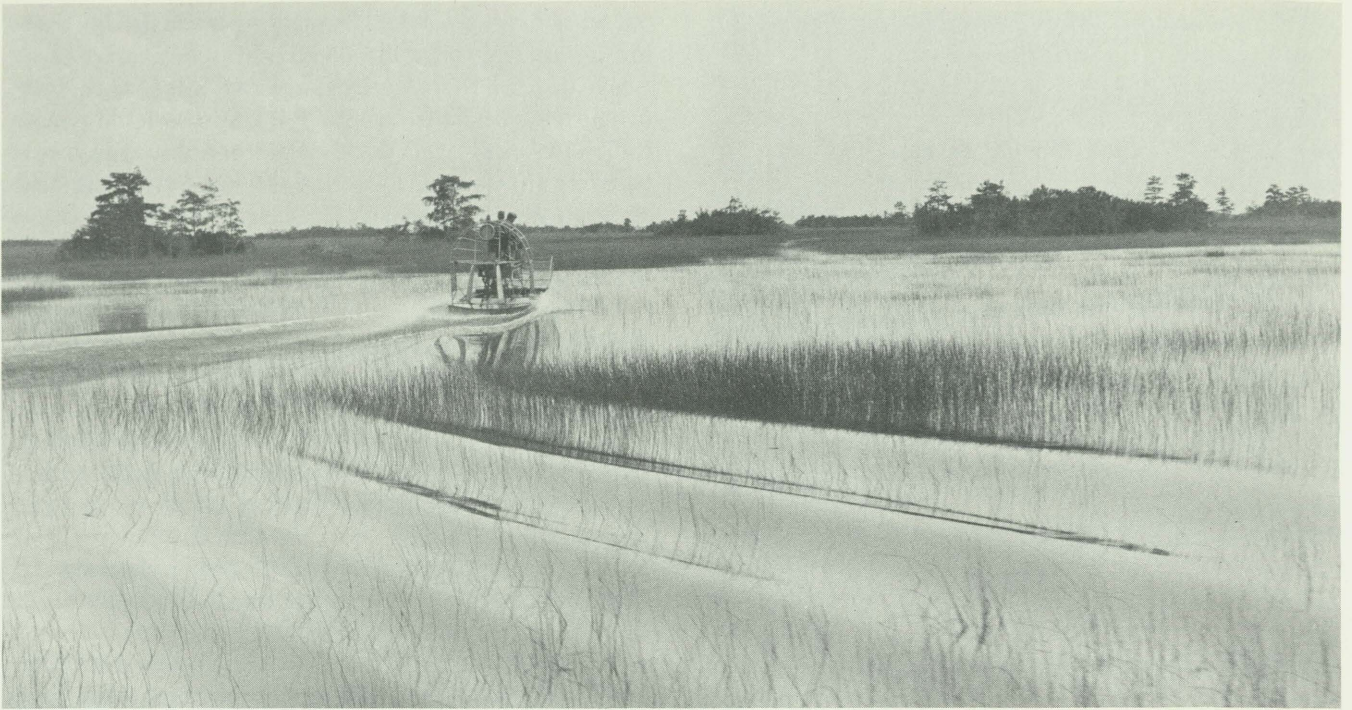


Photo By Bob Burlison

more than 1100 square miles of glades country is available to outdoorsmen

Everglades Wildlife Management Area

ONCE REMOTE AND MYSTERIOUS, the sprawling, grassy waters known as the Everglades have beckoned to civilized man ever since savage Indians roamed the marshy wilderness centuries ago. In its original state, the region comprised one of the largest freshwater marshes on the North American continent, ranging from 30 to 40 miles in width and extending from Lake Okeechobee south some 100 miles into what is now Everglades National Park.

Today, nearly half of the Everglades located in the western portions of Dade, Broward, and Palm Beach counties is being preserved in a more or less natural state in three vast water storage impoundments, called "Conservation Areas," of the South Florida Water Management District. Undeveloped Glades in both public and private ownership still remain outside of these areas, but most have been developed for agricultural purposes or have given way to residential development as a result of western expansion along Florida's heavily-populated Gold Coast.

The 210 square miles of Conservation Area 2 and the 914 square miles of Conservation Area 3 were combined for designation as the Everglades Wildlife Management Area in 1952, and are operated by the Game and Fresh Water Fish Commission under the terms of a cooperative and license agreement with the Water Management District. Conservation Area 1 is leased to the U.S. Fish and Wildlife Service as the Loxahatchee National Wildlife Refuge.

To the casual onlooker, it appears as if you could walk across the Everglades without much trouble. On closer observation, however, the intrepid trekker soon realizes that he will need other means of transportation to travel across this "river of grass." An average of one to two feet of water is hidden beneath the miles of swaying, crackling, sharp-edged sawgrass which dominate the humid, subtropical setting. This endless needlepoint kaleidoscope is broken only by an occasional tree island community, or hammock, with its species of wax myrtle, willow, cabbage palmetto, and wild coffee growing interspersed among varieties of swamp ferns and vines.

Researchers believe that each tree island at one time or another was a camping spot for the Calusa and Seminole Indian tribes. Where the Indian trod, outdoorsmen now hunt and fish, moving into the sawgrass marshland by small boat, airboat, swamp buggy, or halftrack. Over 5,000 south Florida sportsmen utilize the Everglades Wildlife Management Area each year for recreational activities which include hunting, fishing, frogging, camping, hiking, boating, bird watching, sightseeing, and simply "getting away from it all."

For those who journey by boat, there are some 40 species of fish to be found in the Everglades. Grassy flats and deepwater canals provide the angling public with the opportunity to catch largemouth bass, redear sunfish, speckled perch, bluegill, catfish, pickerel, bowfin, gar, and an occasional snook or

tarpon. The latter two represent saltwater species that have become established in the Conservation Areas.

Much of the angling is done on one of the four major waterways of the Everglades: (1) Hillsboro Canal, which divides Conservation Area 1 and 2 and flows to the Intracoastal Waterway between Boca Raton and Pompano Beach; (2) North New River Canal, separating Conservation Areas 2 and 3, with its tidewater outlet at Fort Lauderdale-Hollywood; (3) Miami Canal, which cuts diagonally through Conservation Area 3 to the east coast at Miami; and (4) Tamiami Canal, a top bank fishing area, bordering Conservation Area 3 at its southernmost point just north of Everglades National Park. All together, there are some 300 miles of fishing and boating around the Glades.

For those who take to the marsh by airboat or swamp buggy, the deer herd in the Everglades offers a valuable natural resource and community asset. It furnishes the only big game hunting in south Florida within an hour's drive of the metropolis

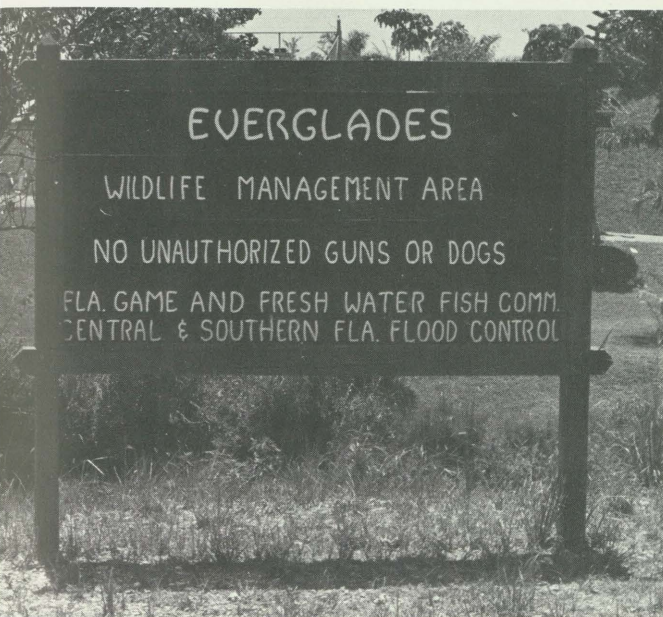
along the lower east coast. While public demand for deer hunting has increased considerably over the past decade, yearly sustained harvests remain steady, indicating a stable and healthy Everglades deer herd. This has not only been good news for the sportsman, but also for other conservation groups in south Florida who do not hunt but are interested in deer for their esthetic value.

Joining the white-tailed deer on the list of Everglades wildlife are the wild hog (the other principal game animal), the raccoon, opossum, marsh rabbit, and otter. Occasionally an outdoorsman sees a black bear or a panther, both protected species.

Attracted to the wet prairies and sloughs and providing another important hunting resource are waterfowl like the blue-winged teal, mallard, wood duck, hooded merganser, and fulvous tree duck.

Numbered among the resident wildlife are large segments of colonial and wading birds like the great heron and the snowy egret. Coots, gallinules, grackles and red-winged blackbirds are often sighted along

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Travel in "sea of grass" country requires special rigs. An airboat, left above, one of the most popular ways of getting about in the difficult terrain, heads for trail slicing into the glades. Swamp buggy, right, is another popular means of transportation. This brand of over-sized wheeled vehicle comes in a great variety of sizes and styles. Successful deer hunters pause for lunch. High seats give good view over stands of sawgrass.

This is No. 23 in a series of articles on Florida Wildlife Management Areas. Maps and regulations on individual areas are available from regional offices and from the Florida Game and Fresh Water Fish Commission, 620 S. Meridian St., Tallahassee, FL 32304.



By BOB BURLESON

(continued from preceding page)

the canals by boaters and fishermen, while overhead, hawks, ospreys, and turkey vultures can usually be seen soaring in search of a snack.

One of the most important but least understood natural resources of the Everglades WMA is the bullfrog, which is of tremendous economic importance to commercial froggers and a source of recreation for sportsmen. Many people in south Florida supplement their livelihood with revenue obtained from the sale of frog legs. Not only does this frog supply the market with a highly prized delicacy, it ranks highly as a game animal to many airboat enthusiasts, and probably ranks close to first as a link in the wildlife food chain and the total ecology of the Everglades.

As man's greater awareness of his environment developed, so did his concern for those lesser creatures whose existence depended upon his actions. Establishing endangered species lists was a progressive step forward, and the Everglades Wildlife Management Area continues to provide habitat for many of these threatened species. The Florida panther, the everglade kite, the southern bald eagle, and the wood stork utilize the Conservation Areas either on a temporary or permanent basis. The region also plays host to a variety of rare and endangered plant life.

Access and entry into the Everglades is made from several major sites. Boat ramps are provided along the Tamiami Trail (U.S. Highway 41) west of Miami and at the Everglades Holiday Park and Sawgrass Recreation Areas along U.S. Highway 27. Both of these facilities include a concession building, where sportsmen may purchase hunting and fishing equipment and licenses as well as food and beverages. Boat rentals, guided tours, airboat rides, and other services, including camping space, are also available. Additional launching facilities can be found along Alligator Alley (S.R. 84), which bisects Conservation Area 3 north and south.

Sportsmen traveling by buggy or halftrack use

the limerock levee network which crisscrosses the terrain, to reach the interior marsh. Numerous signs have been erected throughout the area to indicate boundaries and to guide hunters and fishermen. During general hunting season, check stations are established at main entrances.

During the past decade, a 47 per cent increase in population along Florida's southeast coast has placed additional demands on the natural resources of south

Photo By Morrie Naggjar



Photo By William Greer

Photo By Bob Burleson



Florida. One of the most substantial of these demands has been for increased outdoor recreation opportunities. Fortunately, the Everglades Wildlife Management Area can meet a large part of this need.

To provide for sound, systematic planning, development, and management of the Everglades Water Conservation Areas, the 1973 Florida Legislature enacted a law creating the Everglades Recreational Planning Board, to prepare and coordinate the implementation of a recreational development plan for the Everglades WMA. The Planning Board, through the Game and Fresh Water Fish Commission, has improved existing boat launching sites and completed construction on two new day-use facilities along U.S. 27 in north Broward County. It has improved the water treatment systems at two

recreation areas and increased the number of public camping spaces at both. Continued emphasis will be to meet all the resource-based outdoor recreation demands the Conservation Areas can support without detriment to the basic resources.

Because good habitat is the key to stable wildlife populations, the Commission's Wildlife Management Division is involved in several habitat management programs which will benefit wildlife and help maintain the Everglades as an ecosystem. The Commission is cooperating with the Florida Division of Forestry in a program of prescribed burning to minimize the danger of wildfires during droughts. Fire has been used as a game management tool on the Everglades Wildlife Management Area for several years.

While control burning is effective on the native flora, it has little or no effect on the exotic trees and plants which have invaded the Glades. At the present time, the most serious threat is from melaleuca trees. Staff biologists are conducting studies into the experimental control of this exotic import, which is literally choking out the natural vegetation and making some parts of the marsh totally devoid of wildlife.

Working with organized sportsmen's clubs and other concerned conservation organizations, the Commission has constructed nearly 100 manmade "wildlife islands" complete with elderberry, ficus, saltbushes, and adjacent freshwater ponds. These islands will lessen the fluctuation in animal populations in the area by providing high-ground refuges during times of flooding and life-saving water and browse during times of drought. The result will be to obtain a maximum annual sustainable production of deer and other desirable wildlife species.

The Everglades has long been a part of Florida's outdoor heritage. The Everglades Wildlife Management Area serves to remind us of that heritage while maintaining a wide variety of recreational opportunities for the modern sportsman. Few locations can lay claim to this unique achievement. ●

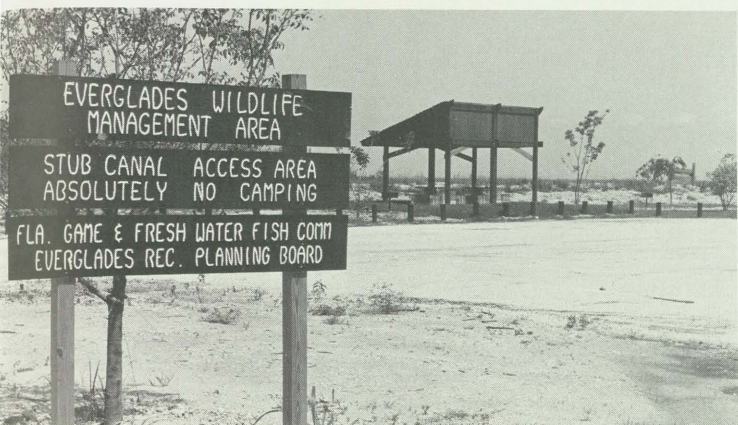


Photo By Bob Burleson

White head and tail mark mature bald eagle, one of the endangered species that range the Everglades. The raccoon finds the vast marshland to its liking and is a common resident. Everglades Holiday Park along Highway 27 provides facilities for those who visit the area. A pair of sawgrass country inhabitants are these husky bullfrogs, below. Frogging is a source of income, sport, and good eating. Canals and trails, right below, give access to the Everglades to those persons equipped with proper means of transportation.

Photo By Tom Wayman



Photo By Bob Burleson

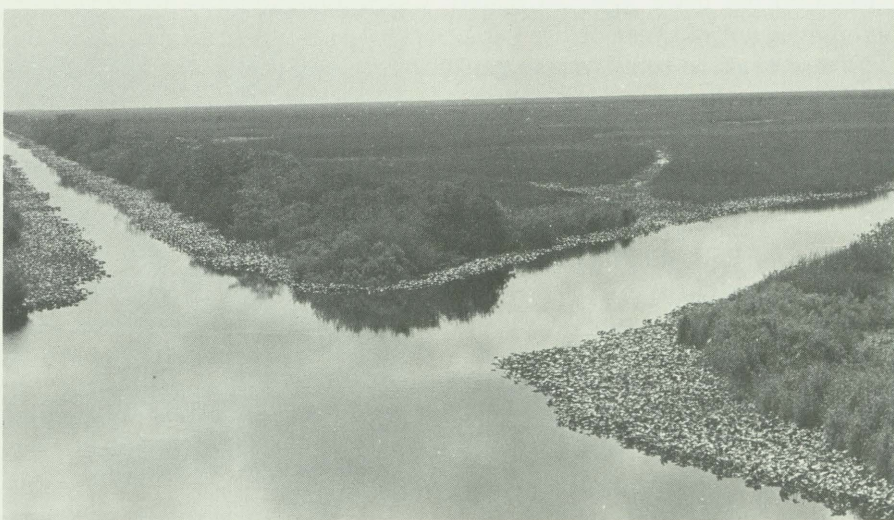




Photo By John Dent

TALK ABOUT BASS," the old man said as he leaned forward, placing his elbows on his knees. He glanced around the circle of bass fishermen who had just come in from a disappointing day on Lake Kissimmee. Satisfied that he had the attention of the group, he continued, "Well boys, I recall when the canal to Lake Jackson was clear, you could run up there in a skipjack and fill the boat in an hour." As he waited for the words to sink in, he shifted the lump in his jaw to the other side, and turned his head. The long brown stream of spittle narrowly missed an old black and tan hound, which got up and moved out of range before lying back down.

"There must be some way to get in there," one of the fishermen said.

"Sure," the old man answered, "you can get in by jeep, that is, if you don't get caught. The folks who own that land around it are mighty particular about who drives through the pasture." He again moved the lump of Red Man to the other cheek, and continued, "No sir, the only way you're goin' to fish that lake is to grow wings."

The old man's last statement was to roll around in the back of my head for the next few years before surfacing. During that period, Lake Jackson, east of Lake Kissimmee, was acquired as part of the Three Lakes Wildlife Management Area, and has now been opened to fishing.

a properly equipped light plane may be the
key to some hot fishing action

Barnstorming For Bass

One afternoon, as I was flying over the eastern end of Polk county, I noticed a lake that was connected to Lake Hatchineha by Reedy Creek. The creek was jammed with hyacinths, which prevented anyone from fishing in the lake. Thoughts of virgin fishing territory and high angling adventure permeated my brain as I headed back toward the Winter Haven Airport.

That evening I called John Dent, my fishing and hunting partner, who just happened to have a sea-

plane rating. He is usually willing to go along with suggestions that involve hunting and fishing; in fact, the conversation went something like . . .

"Let's go bass fishing."

"That knockin' on the door you hear is me."

We met at Brown's Seaplane Base in Winter Haven as the sun was invading the central Florida landscape. As I looked over the gear I'd brought along, I realized that most of it would have to remain behind. There isn't much room for baggage in a Piper Cub.

Aloft over the central Florida landscape, pock-marked with hundreds of lakes, in a seaplane filled with bassin' gear, one begins to feel like the proverbial mosquito in a nudist camp. We knew what we were going to do, we just didn't know where to start.

Scanning a prospective bass lake from the air reveals far more than looking one over from the surface. Features like water depth and structure are immediately apparent during a low-level flyby. Some considerations enter into the picture that wouldn't get a second thought on a normal fishing trip. A clear landing and takeoff area is important, as is good fishing structure in less than 4 feet of water. Gone are the lazy-boy recliners in the old bass boat, laden with the huge arsenal of equipment that most of us have come to regard as the bare necessities. A pair of chest-high waders becomes the only method of transportation once the fishing area is reached.

Equipment selection is extremely important with regard to weight restrictions and versatility. A fly rod may be just the ticket in a lake with a shallow grass line; it might become excess baggage in one with overhanging trees.

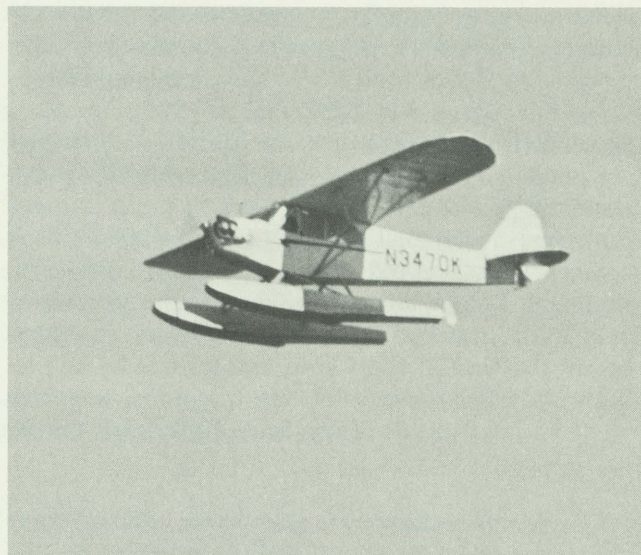
Lures should include those which are effective in

areas of heavy fishing pressure. Plastic worms, crank baits, and spinner baits work equally well in lakes where fishing is rare.

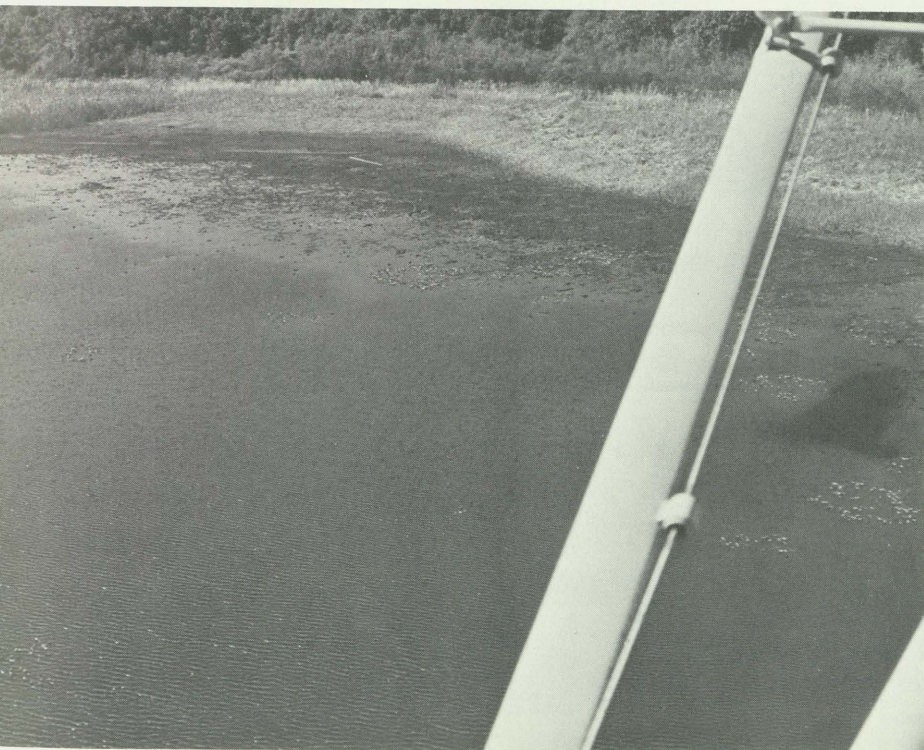
I also like to construct a few "lifelike" creations and offer them up to "inexperienced bass." One such concoction which has proven very successful is a 4-inch twister tail grub in purple or green with eight rubber legs inserted through the body with a darning needle. It can be fished on the bottom with a slip sinker or cast with a fly rod or ultralight equipment.

We made a low pass over the lake and marveled at one of the most beautiful bass lakes we had ever seen. I detected a slight drool from John as he nodded and grinned back at me. The peaceful setting was momentarily interrupted by the engine's roar as we

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Photos By Greg Sefton



Author hoists a fly rod caught 4-pound largemouth from the waters of back country lake in photo on opposite page. Float plane that took writer and pilot friend to new fishing ground is Piper Cub riding at anchor in the background. Aerial view of a lake, left, reveals important physical features that aren't apparent from ground level.

By GREG SEFTON

(continued from preceding page)

touched down on the glassy surface. We taxied to the north end and anchored in 3 feet of water.

Fishing in a lake that is uninhabited by other fishermen has its own rewards, regardless of success. The solitude and anticipation that combine to make fishing the sport of 60 million people, seem magnified in a remote setting.

We flipped a coin to see who would go in which direction, and parted with our usual bet: low man buys lunch. I had gone about 50 yards and was pondering the wisdom of starting with the fly rod when a fat 4-pounder inhaled the Queen Bee I had tied on. The lake's serenity, which had returned after our landing, was once again shattered by the aerobatic fight that ensued.

The fish were there, all right. I could see them rising to inspect the fly, but they didn't seem to be hungry. In another 200 yards I managed to convince a 2-pounder that it was time for breakfast.

An hour later, I headed back to the plane for a cup of coffee. John was nowhere in sight as I reached the plane and sat there on the float, sipping from a steaming cup. I saw a swirl next to the grass and broke out my baitcasting rod. As I attached a purple spinner bait, I could see John coming down the shoreline. I stood up on the float and began casting next to the grass line. An explosion occurred almost before the lure hit the water, and the battle was on. Fighting a fish while balancing on an airplane float must resemble a tug-of-war on a tight rope. On his

second jump, the bass returned my spinner bait and left the area.

"How did you do?" I asked.

"I got two about two pounds each, and one about a pound and a half."

"I had a four and a two," I said, and added, "That's six pounds to five and a half."

He thought for a moment and said, "Come to think of it, one was closer to two and a half."

We decided to go Dutch on the lunch, and talked about the lake for a while before loading the plane to head for home. As we cleared the tree line after takeoff, we both cast a longing glance back over our shoulder at the little lake, vowing inwardly to return someday.

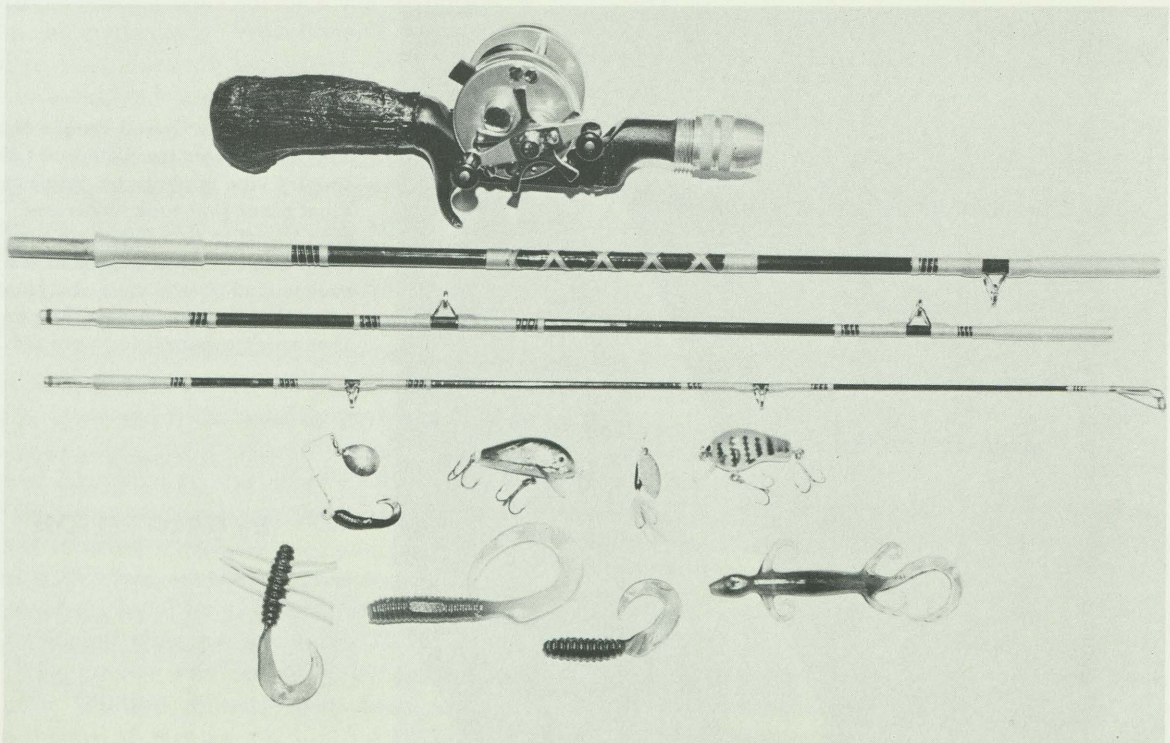
On the way back to the seaplane base, I thought about the trip. There had been more successful ones, and a few that weren't as successful, but I found myself leaning toward the positive side of the ledger. We had discovered a new place to fish and had combined two of our favorite pastimes in the process. We had also experienced a beautiful day afield, and shared a comradeship that goes back a long way. These are the things that measure a successful trip—not the weight of the stringer.

I'm sure the airplane will never replace the bass boat as a fishing conveyance, but it's tough to beat for hard-to-reach spots, and who knows, maybe someday John and I will discover that "glory hole."

If you're inclined to try barnstorming for bass, you'll have to leave much of your present comfort behind, but be sure to take along an affinity for adventure and a sense of humility in the face of an unknown environment. You'll need them where you're going. ●

Compact equipment is essential for flying fishermen. The four piece rod was made by the author for backpacking. Note dragonfly lure, lower left. This homemade critter has been very successful.

Photo By Greg Sefton



Low Cost Shooting Practice

HUNTING

if the high cost of ammunition keeps your gun mothballed for too much of the time, here's one way to get around the problem



By EDMUND McLAURIN

DURING A RECENT COFFEE SESSION with friends, one remarked that he aspired to become a good shot, but in the same breath lamented he couldn't afford to shoot the expensive rifle and shotgun ammunition needed to practice regularly.

"Get a good Daisy air rifle," I countered. "That's how I learned."

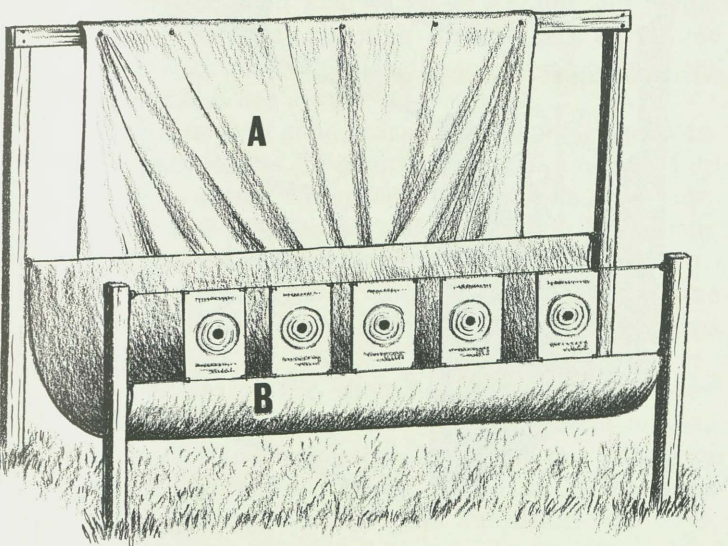
It was well intended advice.

Practicing with an accurate, spring-powered air rifle is an easy, inexpensive way to quickly develop marksmanship skill, or improve it. Better still, in these days of growing shortage of public shooting ranges, air rifle practice can be quietly carried out in one's own back yard or, with a hanging-rug backstop, even inside garage or home.

Besides conventional paper targets that fit in specifically designed holders, there are various commercial sound-type air rifle targets that indicate hits by audible tinkle or bell ring.

Where space is available, a compact, endless belt of moving game figure targets can be improvised, using directions and illustrations to be found in the October 1967 issue of *The American Rifleman*. (If you do not keep a file of *Rifleman* magazines, the National Rifle Association, 1600 Rhode Island Avenue, N.W., Washington, D. C. 20036, can furnish you a photocopy of the article at a nominal charge.)

Seen below is air rifle backstop with (A) rug or heavy cloth, and (B) cloth shot catcher.



Needed gears and pulleys, a bicycle chain, and even a small motor can be acquired from your community junkyard without much financial investment.

In endorsing the value of shooting practice with an air rifle, I do so from experience dating back to age 7, when I acquired my first air rifle, a Daisy Model 25. Significantly, I still use a Daisy Model 25, which is a forced-feed, 50-shot-capacity, pump-action repeater.

The model was comprised of two assembled halves, the long, heavy metal cocking-lever channel on the forward half slipping tightly into the receiver and stock half, with joined halves further locked together with a threaded through-bolt. The result was rigid, virtually one-piece assembly. The mechanism itself was simple and serviceable. The Daisy engineers did their drawing-board work well in designing the Model 25.

The front sight was a high, narrow-but-sturdy, blued steel blade, spot-welded to the barrel housing. It was nonadjustable. The rear sight was an equally sturdy steel stamping, made in wide and deep V pattern, adjustable for elevation by moving a notched slide under the sight's tensioned leaf. It was somewhat further from the aiming eye than a similar open rear sight on a .22 caliber cartridge firearm.

Projectile power was developed from a leather-washer piston, backed by a powerful spring that was automatically cocked as the under-barrel cocking slide was pulled back, using the grooved wood cocking handle. The rifle was ready to fire when the handle was returned to fully extended under-barrel position.

As a small kid, I used to have to place gunstock butt against joint of right leg and body and pull back on the cocking handle with both hands outstretched, to activate the cocking mechanism. Later I could accomplish the cocking operation with hands alone, without supplementary body brace. Also, in time, cocking for the next shot was performed almost subconsciously.

The air rifle shot holding unit was of long tube, muzzle-insertion type, with threaded base that secured and locked the loading tube assembly deep inside a shotgunlike barrel housing.

To load the magazine, a spring was pulled up by provided finger spur until the spur reached a notch in the housing, where it stayed until manually
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released. Shot were loaded through a shot-port hole uncovered by the compressed spring.

When the magazine tube was loaded to its 50-shot capacity, the forced-feed spring was released from its holding notch, and functioned on its own thereafter. Every time the air rifle was cocked for firing, this forced-feed put a single shot pellet in line with the spring-compressed power piston, for release when the shooter pulled the trigger.

In designing their Model 25 pump-action air rifle, the Daisy engineers put the actual barrel (a straight, unrifled, very smooth tube) alongside the forced-feed shot magazine that mechanically loaded shot into barrel one at a time. This unique feature enabled a Model 25 owner to quickly replace worn or damaged barrel or shot magazine with a completely new unit, without tools.

Over a Daisy Model 25's hard-working life span, I sometimes had to replace a broken trigger spring or a lost through-bolt, but these replacement installations were of rare occasion. Then, as now, the Model 25 pump-action repeating air rifle had rugged mechanical construction, and seldom gave functional trouble when kept clean and lubricated. However, I customarily sent my much-used Model 25s back to the factory once a year, for installation of new power spring and piston, new trigger spring, and usually a completely new combination barrel and shot reservoir assembly.

The power springs used in the Model 25s of my boyhood were identical in appearance, and could be factory replaced cheaply when they began to lose power, but new springs varied markedly in audible released spring tension, as well as degree of imparted gun shock. Almost all new, or factory overhauled, Model 25s "jumped" to some objectionable degree from this mechanical condition. Not until fired some 2,000 times, supplemented with muzzle-induced oil saturation of the leather piston, did the average Model 25 settle down to undisturbed sight picture on firing, and best accuracy.

I have always taken great pains to "tune" all my Model 25s for minimum vibration of power spring, and for tied-in smooth and easy trigger pull, for undisturbed firing aim. (Such gunsmithing is not necessary with certain other model Daisy air rifles. They have already been "tuned" for smooth operation.)

Unfortunately, substitution of a plastic stock for the wood stock originally used on the Model 25 has resulted in troublesome loosening of gunstock assembly with action, and thereby created inconsistent accuracy on firing. Simply, the substituted plastic gunstock does not team with rifle action to produce and maintain accuracy.

A spring-powered air rifle *must* have all stock screws firmly locked in place! The same holds true of sight screws. Otherwise, there will likely be serious change of zero from shot to shot.

With some of the plastic stocks fitted to Model 25 Daisy air rifles, seemingly no amount of stock screw tightening, or installation of extra anchoring screws, will make much permanent difference. Only by adding marcel or external-tooth lockwashers to stock screws, then epoxying all stock holding screws, as well as plastic stock, to rifle action, can accuracy-destroying plastic stock looseness be completely overcome. The Daisy people should never have substituted a plastic stock for the wood type originally used on the Model 25!

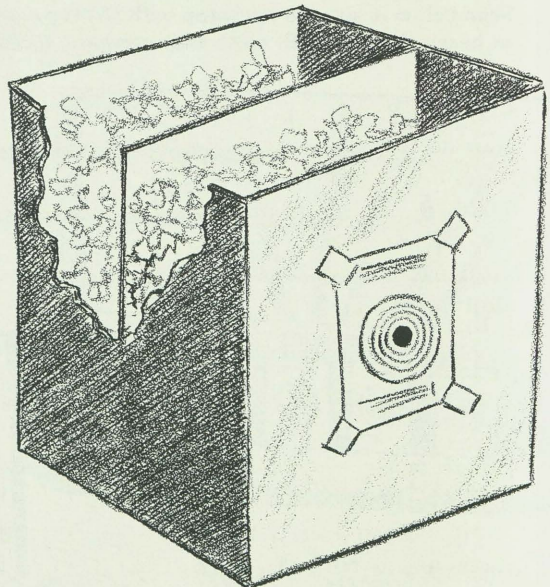
In the heyday of most of my Model 25 Daisy air rifles, ammunition was relatively inexpensive. Then, one could purchase a tube of air rifle shot for a nickel, or six tubes for a quarter. Even so, keeping a supply of ammunition proved a drain on my youthful finances, for I often used several tubes of shot a day. In time, I found it more practical and economical to buy air rifle shot in bulk-packaged 25 pound bags.

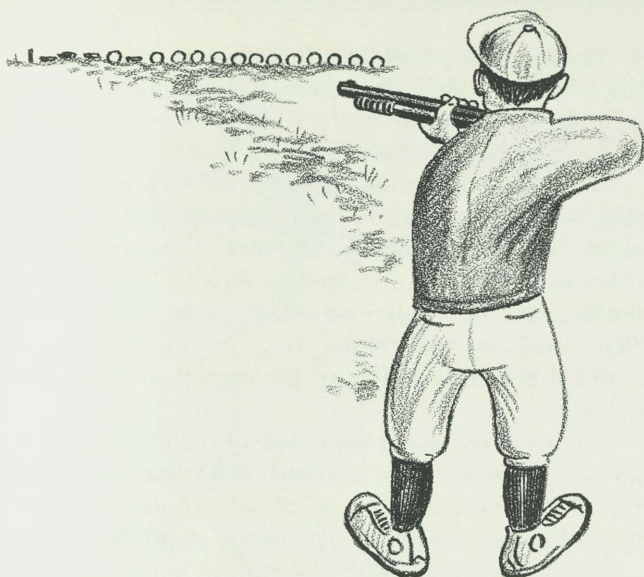
Although commonly, and incorrectly, referred to as BBs, air rifle shot are not the same as BB shot used by shotshell reloaders. Air rifle shot are smaller in diameter, measuring .175" against .180" for BB's.

My favorite inanimate targets of boyhood were abundantly available soft drink bottle caps and, later, when precisely-applied skill accrued from much practice, smaller objects, like upright-positioned kitchen stove matches, and air rifle shot placed in spaced sequence along a piece of 2x4. The bottle caps had 22 ft. range, the wood match shafts about 12 feet, and the individual air rifle shot about 9 feet.

Shooting offhand and relatively fast, I achieved long "runs" on some of these targets. Consecutively hitting 15 bottle caps placed upright in a long row, by reason of narrow, wavy side pressed into ground,

A cardboard box filled with shredded paper or plastic foam packing material is adequate backstop for air rifle practice.





Drawings By Wallace Hughes

became commonplace. Now and then, there was a "run" of 25 consecutive hits, and one lucky day, 42.

My greatest period of air rifle shooting interest coincided with years when horse-drawn ice and vegetable wagons made daily rounds. Both gray-striped horse flies and English sparrows were abundant as live targets.

On sunny days, big flies liked to rest on the back of a large wood barn that constituted a boundary of my home's back yard. Direct hits created instantly detectable blotches on the wood siding. Shots were always made at a slight angle, to avoid dangerous pellet bounce-back.

The proprietor of the neighborhood grocery store I frequented was aware of my prowess, particularly so after the day I stuck four straight pins in the wood top of his wrapping paper holder, and, at a distance of seven feet, hit the slender targets, shooting off-hand.

If I happened to be in the store when a salesman was making a call, the proprietor would invariably tell of the stunt and offer to place a bet on me in respect to being able to hit a straight pin target from seven feet, shooting offhand. He won more times than he lost. I usually could hit some of the four pins, if not always all.

In those long gone years, home of the Daisy Mfg. Company was at Plymouth, Michigan, instead of its present Rogers, Arkansas, location. Somehow, news of my skill with a Daisy air rifle reached Company officials. One day a representative showed up to see me shoot. Shortly thereafter, I was given the opportunity of staging demonstrations at designated points.

Long before the shooting fraternity ever heard of "Lucky" McDaniel and his lesson-taught method of instinctively using an air rifle in the hitting of close range aerial targets, I had the same basic method down to a "T." The knowledge and skill, however, was acquired the hard way; from lone

trial and error, combined with much practice. I was shooting close range aerial targets instinctively some 28 years before McDaniel, as I look back and calculate time.

Essentially, both my method and McDaniel's are based on quickly catching moving target with aiming eye and, keeping vision concentrated on target, bringing rifle to shoulder and firing as shouldered rifle's barrel and muzzle coincide with already achieved line of aim. During this action sequence, gunstock is pressure "locked" against shoulder at gun butt and against jaw at stock comb, so that the rifle definitely points where I look.

This firm contact of butt stock with shoulder, and gunstock comb with face, whether achieved consciously or subconsciously, is important in accurate use of an air rifle. Even though there is only slight spring release tension shock on firing, still, shooting a standard spring-type air rifle requires a decidedly steadier hold than when shooting a conventional .22 caliber metallic cartridge firearm. Keep that fact paramount in mind, and make conscious effort to achieve gun control, until continued practice makes such coordination virtually subconscious.

In my untutored shooting days, the lead necessary to match target movement and pellet trajectory accrued with practice. Like McDaniel, I shot with both eyes open, and still do, whatever my chosen firearm. In essence, it was accurate gun muzzle pointing more than consciousness of aligned front and rear sight, an element that McDaniel further emphasized by dramatically removing sights from air rifles used in his instruction of paying pupils. The theory—and it's supported by performance—is that once a shooter knows he can hit moving targets quickly and regularly with an air rifle, he can move on to a standard rifle or shotgun with equally satisfying results.

Shortly after a journalist friend had publicized McDaniel's instinctive shooting method in magazine and book form, the Daisy firm, which had amalgamated with the Heddon fishing tackle people, began to stress the basic method under "Quick-Skill" descriptive name.

Because individually introduced errors in shooting an air rifle are not covered up by firing recoil, as with a powder weapon, "Quick-Skill" has proven to be the perfect range training exercise for both U. S. military and school ROTC units. Accomplished marksmen can thereby be developed in a reasonably short time.

Although I own and still use a Daisy Model 25 air rifle, my current interest centers on alternate use of a lever-action Daisy Target Special Model 99, with hooded front sight and adjustable rear peep. This is the air rifle model used in the formal paper target competition sponsored jointly by the Daisy Company and the National Rifle Association. It sells for less than \$35.00. ●

THE COOT

By LOIS ANDERSON

ANYONE WHO HAS LIVED in Florida for at least one winter is probably familiar with the coot, or "mud hen." Wherever there is fresh water, the "crazy" coot will be found. Coots are probably the most abundant waterfowl in Florida. They are easily recognized by the way they paddle through the water bobbing their heads back and forth like a chicken when it walks. Another distinguishing feature is its white beak. No other water bird has anything like it.

Though often mistaken for a duck, the coot is an inland water-dwelling bird of the genus *Fulica*, belonging to the rail family, Rallidae, of which there are about 10 species. Our North American variety is related to the European coot. They are approximately 13 to 16 inches long, with dark gray plumage that is almost black on the head and neck. Unlike most water birds, they do not have webbed toes. Instead, their toes are fringed by a lobed membrane which helps them to swim and walk over plant-choked marshes and ooze.

The coot is a wild bird with many wild ways. Yet, the strange migratory bird is not bothered by populated areas. Practically all the lakes in Florida have some coots, and at certain lakes they swarm all winter. On Lake Okeechobee alone, the wintering coot population has been estimated at 20,000 or more. The coots usually arrive in September and leave by late April, though many do stay through the spring, and some even throughout the summer.

Coots feed and live among ducks, rails, and gallinules, uttering many sounds, from whistles, clucks, squawks, and shrieks, all in a variety of ranges. When nesting in Florida, the coot carries out normal procedures by placing its nest in a clump of grass

or aquatic vegetation in freshwater marshes or at the edges of ponds or streams. Their eggs number from 8 to 14 and are buffy white covered with fine flecks, and heavily speckled with black.

Like many birds, coots have monocular vision; that is, each eye can be used independently of the other. When a single eye is focused on an object, it is quite difficult to judge distance and size. Coots compensate for their monocular vision by jerking their heads as they move, thus giving themselves a series of rapidly changing views of their surroundings.

Coots patter along the surface each time they have to fly, for the same reason that seaplanes taxi along the water before takeoff: to gain momentum. The seemingly short-winged coot appears to rise with difficulty from the water, but is capable of sustained and rapid flight, as some hunters have learned.

This rather peculiar water bird is often classed with the duck family for good reason. Though scorned by some, the coot can be hunted in the winter season, when it is most gregarious. Countless numbers of coots are killed during the migratory bird season in our state. The hunter's daily bag limit is 15 coots. And, contrary to some, the flesh can be as palatable as many other waterfowl, especially if they have fed on favorable vegetation, which they frequently do. According to Alexander Sprunt, in *Florida Bird Life*, eating experiments were made with seasoned hunters, who were unable to tell cooked coot from duck.

The error most hunters make in preparing coot is to parboil it. The fatty layer under the skin retains the flavor of any seafood diet. Parboiling saturates the edible part of the bird. The trick is to field dress a coot, and, like quail, the breast is about all there is.

Florida has annually adopted the Federal guidelines of a daily bag limit of 15 coots during certain open hunting dates in November, December, and January, with no assigned point values. This liberal bag limit, as compared to other waterfowl limits, may account for the new interest in shooting our "crazy" coots. ●

Photo By Wallace Hughes





CONSERVATION SCENE

New DU Program

A 68 MILLION DOLLAR PROGRAM to provide habitat for North America's waterfowl has been announced by Ducks Unlimited, the international waterfowl conservation organization.

The plan was announced at the organization's 39th annual board of trustees meeting held in Mexico City. The plan calls for Ducks Unlimited, Inc., to raise the money over the next 5 years, for the development of wetlands in Canada, where over 70 per cent of the waterfowl on the North American continent originate. DU, Inc., will forward \$7 million dollars to DU (Canada) during the current calendar year and accelerate this rate of funding over the remaining four years of the program.

Since its inception in 1937, DU has raised over 48 million dollars for the preservation of wetlands. As a result over 2,200,000 acres have been set aside, providing about 11,000 miles of shoreline for nesting. Nearly 1,300 wetlands projects have been constructed. These projects provide living room for some 300 species of wildlife, including several endangered species.

Eagle Nesting

DURING A 3-YEAR STUDY of the bald eagle in Florida, from late

1972 through 1975, 274 successfully nesting pairs of eagles produced 402 young, a rate of 1.47 young per pair. Pines were favored as nesting trees, with cypresses and red, white, and black mangroves also utilized.

State Shooters Unite

ELEVEN SPORTSMEN'S GROUPS have formed a coalition to defeat restrictive gun legislation. The umbrella organization, called "United Sportsmen of Florida," represents 7,000 group members and more than 30,000 members of the National Rifle Association and the National Muzzle Loading Rifle Association in Florida.

The state groups will retain their local autonomy, while the new, unified organization will serve as a rallying point for the membership in shooting sports activities.

Newly elected president Hank Sorensen, of Tallahassee, said, "Approximately 30 gun control bills were introduced in the past session of the state legislature, but received little action by either the Senate or the House. However, the introduction of antigun legislation marks just the beginning of the fight which we, as sportsmen and law-abiding citizens, have ahead of us."

For further information, write United Sportsmen of Florida, P.O. Box 535, Riverview, Fla. 35569.

Islands Preserved

RELEASE OF UP TO \$8,580,515 from the Environmentally Endangered Lands account for purchase of 893.5 acres on Cayo Costa and North Captiva Island, located offshore in Lee County, was approved in July by the Governor and Cabinet.

The acreage approved for purchase represents about one-half of the qualified environmentally endangered lands on the two barrier islands, according to Harmon Shields, executive director of the Department of Natural Resources.

"While efforts are still under way to negotiate for the remaining qualified acreage, we feel it is timely to go ahead and act on those already negotiated," he said.

Describing the islands, Shields said they consist of barrier beaches, forested uplands, and coastal swamps. "There is no access by automobile and no substantial development, although continuing development is expected if the islands remain in private ownership," he pointed out.

Shields also noted that the property makes up the largest remaining expanse of undisturbed beach in southwest Florida. "The beach provides nesting sites for sea turtles threatened by extinction, and a habitat for shore birds. In the undisturbed hammocks is West Indian-type vegetation no longer common in Florida."

He said the mangrove swamp along the islands' bay shores contribute to the Charlotte Harbor-Pine Island Sound estuary.

Eagle Protection

THE BALD EAGLE, symbol of the Nation, representative of courage, strength, and independence, has been proposed for listing as endangered in 43 States and as threatened in five others, Keith M. Schreiner, associate director of the Interior Department's U.S. Fish and Wildlife Service, announced.

"It is ironic and particularly disturbing to me that at the time of the Bicentennial the living em-

(continued on next page)

(continued from preceding page)
bodiment of the spirit of America is in such a predicament," Schreiner said. "The action we are taking today will help ensure that this magnificent bird will be around for the tricentennial."

Many people believe the bald eagle is already listed as endangered. The species is protected by the Bald Eagle Protection Act of 1940, but only the southern subspecies is listed as endangered. The proposal, published in the July 12 *Federal Register*, would provide maximum protection for the species by extending the coverage of the Endangered Species Act of 1973 to all bald eagles in the continental United States. (Bald eagles do not occur in Hawaii, and their population in Alaska is considered healthy.) The 1973 Act prohibits any Federal agency from authorizing, funding, or carrying out any action that would jeopardize the existence of listed species.

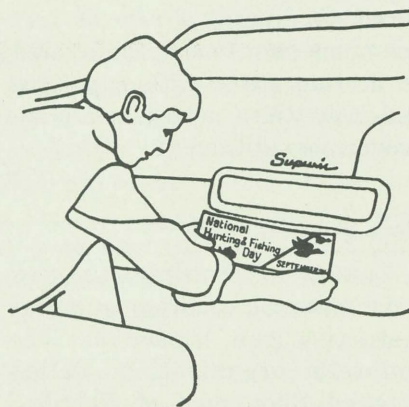
Endangered species receive complete Federal protection. None can be killed, placed into commerce, or possessed without a special permit. Permits are given only for scientific purposes or to enhance the propagation or survival of the animal. Threatened species regulations can be as stringent as endangered species controls, or more relaxed.

Promote NHF

SPORTSMEN NEED NOT belong to an organized rod and gun club or conservation group in order to help promote National Hunting and Fishing Day, which is September 25th. There are many things the individual hunter or fisherman can do on his own to help spread the word about NHF Day.

There are 55 million hunters and fishermen in America, according to NHF Day headquarters, in Riverside, Conn. All are honored by National Hunting and Fishing Day and all should do their part in helping to make the day a success.

National Hunting & Fishing Day September 25, 1976



Most important, every sportsman should plan to attend the NHF Day activities in his area and to take at least one nonsportsman friend. If every hunter or fisherman took a friend to an NHF Day program, more than half the nation would be involved in NHF Day activities come September 25th.

Steel Shot Available

A NEW NONTOXIC STEEL SHOT LOAD, in both 2-3/4- and 3-inch 12 gauge plastic shells, will be available for waterfowl hunting seasons this fall, it was announced by the Winchester-Western Division of Olin Corporation.

The new Super-X Steel Shot load—1-1/4 ounces in 2-3/4-inch and 1-1/2 ounces in 3-inch shells—will be offered in shot sizes 1, 2 and 4 in Winchester and Western brands.

The new Winchester and Western Super-X Steel Shot load will have a suggested retail price of \$8.95 per box for the 2-3/4-inch shells; the 3-inch shells will list at \$11.50 per box.

Extensive research, testing and development have gone into producing the new Super-X Steel Shot load. Several unique features

distinguish it from other steel shot loads and enable it to deliver consistently excellent patterns at normal waterfowl hunting ranges.

Since steel is lighter than lead, more pellets are required to attain a shot charge of equal weight. Winchester-Western technicians surmounted the problem of putting more steel shot pellets into the new shells by utilizing a rolled crimp and specially designed high density polyethylene top wad called the Flyaway wad.

Without sacrificing the sturdy gas-sealing base wad, the rolled crimp enables the new 2-3/4-inch shell to be loaded with 11 per cent more steel pellets than can be used in the same length shell employing the more common fold crimp design and the standard height base wad. In the Super-X 3-inch shell, nine per cent more steel pellets can be used.

The earlier disadvantage of an over shot wad staying in the shot cloud and creating "blown" patterns has been negated by the new Flyaway wad. The uniquely imbalanced wad quickly drops aside, leaving the shot charge unimpeded on its way to the target.

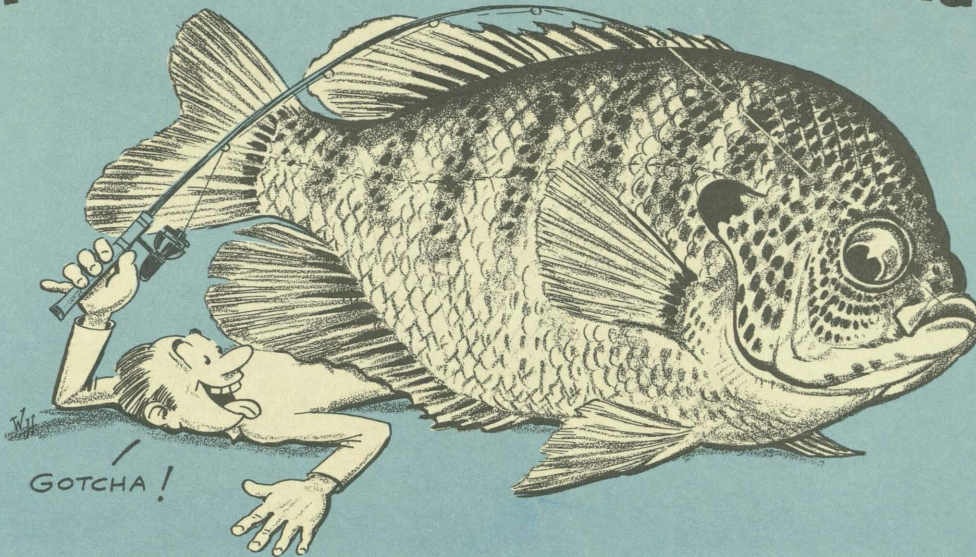
In addition, the new Super-X Steel Shot load has a special one-piece cup wad and shot collar designed to protect shotgun barrels. A high-strength plastic hull gives dependably smooth, positive feeding and ejection in all shotgun actions. A reliable non-corrosive primer provides instant ignition for the clean, progressive-burning Ball Powder propellant.

The use of steel shot is required by law this fall in designated "hot spots" on the Atlantic flyway and in certain wildlife refuge areas throughout the nation.

The use of steel shot may cause barrel damage in some guns and should be used only in arms in good condition and designed for modern ammunition of the proper gauge. If doubt exists, check with the gun manufacturer or a competent gunsmith.

(Editor's Note: See *The Case For Steel Shot*, page 10, this issue, for a related article.)

For that **BiG ONE** that didn't
get
away!



WHO
CAUGHT
WHO?



**ELIGIBILITY REQUIREMENTS
SPECIES**

LARGEMOUTH BASS

..... 8 pounds or larger

STRIPED BASS

..... 10 pounds or larger

CHAIN PICKEREL

..... 4 pounds or larger

BLUEGILL (BREAM)

..... 1 1/2 pounds or larger

SHELLCRACKER

..... 2 pounds or larger

BLACK CRAPPIE

..... 2 pounds or larger

REDBREAST

..... 1 pound or larger

TO BE ELIGIBLE . . .

all fish must have been taken from the fresh waters of the State of Florida, on conventional tackle, with live or artificial bait, in the presence of at least one witness. The catch must have been weighed and recorded at a fishing camp, tackle shop, or similar establishment, by the owner, manager, or an authorized employee. No citation will be issued for a record-sized catch unless fish was preserved for examination.

FLORIDA WILDLIFE'S FISHING CITATION

is available without charge to subscribers to FLORIDA WILDLIFE Magazine and their immediate families who catch any of the listed freshwater fish of the prescribed minimum size. A citation for framing will be mailed to the applicant upon receipt of the following application form properly filled out and signed. Only those applications received within 90 days of the date of catch will be honored.

APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION

The Editor, FLORIDA WILDLIFE

Date _____

Game & Fresh Water Fish Commission, Tallahassee, Fla. 32304

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

Name (please print) _____

Address _____

City _____ State _____ Zip No. _____

Species _____ Weight _____ Length _____

Type of Tackle _____

Bait or Lure Used _____

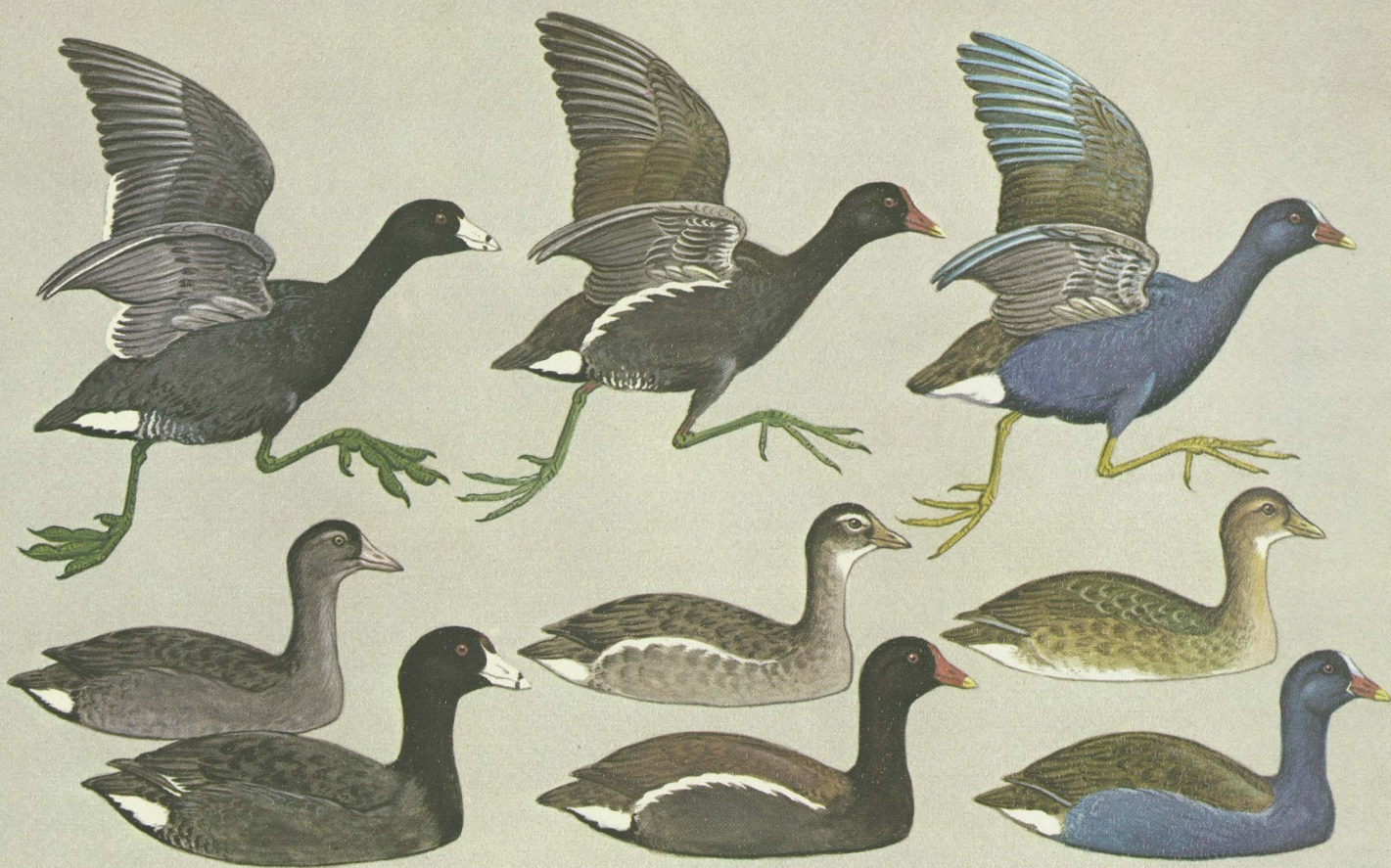
Where Caught _____ in _____ County

Date Caught _____ Catch Witnessed By _____

Registered, Weighed By _____ At _____

Signature of Applicant _____

CUT OUT AND SAVE THIS APPLICATION BLANK



AMERICAN COOT

Adult
Immature
Adult

COMMON GALLINULE

Adult
Immature
Adult

PURPLE GALLINULE

Adult
Immature
Adult

Check one

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